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CAB Dismisses 7 Out of 15 Caribbean Route Applications

Good Report

THE interim report on U. S. aircraft and their performance issued the other day by the Harter subcommittee of the House is a worthy document and should put an end to the senseless and unfair criticism of our military airplanes. The report is not a whitewashing. The analysis and conclusions are eminently fair and reasonable.

It is idle to compare the speed, performance and maneuverability of one plane against another when engaged in war, the committee report said. "These in actual combat are academic questions. It is only common sense to say that our planes and our pilots are performing exceptionally well when they are knocking down two or three enemy planes to every one of ours that is lost." It is the box score that counts.

News stories from various theaters of war bear out the committee's contention that sturdy and better equipped planes win out in the end against slight advantages in climb or maneuverability gained from the sacrificing of armor and firepower. Some of our planes have been riddled in combat, but they manage to get back to their bases more often than not because of those quality extras which have been built into our equipment from the start.

The Harter subcommittee
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Roosevelt To Jump 1943 Plane Production Goal

By ROBERT H. WOOD

PRESIDENT ROOSEVELT is considering raising the 1943 aircraft goal as much as 10% or more over his previously announced request for a rate of 125,000 by the end of next year. This would mean almost 140,000 combat planes.

Industry officials learned of the seriousness of the President's intentions shortly after he returned to Washington, and the President himself at his special press conference on Oct. 1 said in an aside that the plane program will get bigger.

He further revealed that as we

set new quotas in the national war program it will be necessary to build more plants. This would bring about a suspension of the present policy of discouraging construction of any new plant which cannot get into production this year. Clearance by WPB and the War Department has been denied several aircraft plants in the past six months under this policy.

Some hope is held in the industry that the tour, in which the President was able to see the impressive production lines and talk first hand with top aircraft executives, will result in a clearer understanding of

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Board Criticized For Failure to Act Sooner

By ERIC BRAMLEY

IN ANSWER to the first request ever made by the Civil Aeronautics Board for new route applications, 15 domestic and foreign airlines have asked the Board for permission to furnish war-time air service in the Caribbean area.

However, only seven of these were able to meet the Board's requirements and, therefore, will be the only ones considered.

The Board early last month said that its request for applications was prompted by the existence of a "serious" shortage of transportation facilities in the Caribbean which may "adversely affect the national defense and the relations of the United States with Latin American countries."

Numerous protests have been heard in Washington over the lateness of the Board's action. Companies that have had Caribbean applications pending for many months—with no action—are particularly bitter.

Waterman Airline, with an application pending since Dec. 19, 1940, has said that the Board, by not taking action sooner, must assume respon-

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FDR and Donald Douglas Talk Production
Gov. Olson of California and F. W. Conant, Douglas VP, Listen



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Navy Ace Defends U. S. Carrier Fighters

Thach Answers Critics But Angers Army

CARRIER-BASED fighting planes of the Navy, long victims of slighting remarks by more vocal enthusiasts for other types, "have outfought any land-based planes we have in this war," the commanding officer of the old Lexington's fighting squadron and veteran tactician, told reporters in Washington Sept. 29.

Like the reversed "man bites dog" incident, this was news and the comment received wide publicity in the press.

Lieut. Comdr. John S. Thach, just back from months with the Pacific fleet where he received three decorations for outstanding service, spoke his mind with a vigor and freedom seldom permitted in official Navy press conferences. Nearby, however, were Capt. Leland P. Lovette, Navy press chief, and most of the Navy's aviation public relations staff, some of them grinning in delight as Thach defended his sea-based fighters and lashed out at the Army's aircraft, and its battle communiques, in varying degrees of incorrectness.

As reports of Thach's remarks later filtered through the Army Air Forces its officers became furious, and only a direct order "from upstairs" forbidding their comment officially or otherwise, prevented another outburst in the public print of the smoldering bitterness which exists between the air arms of the two services.

The press conference came just as Congress was receiving requests for nearly 3 billion dollars for Navy aircraft (probably including many training and carrier planes) and \$960,000,000 for other aviation purposes, believed to be shore installations. Also, the Army was awaiting release daily of the House Military Affairs Committee's report on military planes, in defense of recent criticism of its fighters and heavy bombers.

Lauding the Grumman Wildcat (F4F-3A) as probably the best fighting plane the U. S. has, Thach decried the popular claim that land-planes are superior in performance, and said he could see no reason why a carrier plane must be inferior. He pointed out that the Jap Zero is a carrier type.

Although he disclaimed a desire to draw comparisons between Army



Thach and O'Hare Scouting for Japs in Their Grumman Wildcats
Two famous lieutenant commanders of Navy's Fighter Squadron 3 (Thach in foreground)

and Navy planes, he asserted emphatically that Navy dive bombers, torpedo planes and fighters have a better record than their Army counterparts or heavy bombers.

"Horizontal bombers cannot stop ships," he said with emphasis. "Not one major ship in this war has been sunk by horizontal bombing. Long range bombers are necessary for scouting missions and bombing land installations, but to be effective in battle they must be escorted by fighters."

The dumbfounded reporters asked what about the Jap battleship Haruna, reported by the Army as sunk by Capt. Colin Kelly. The commander merely repeated his assertion that "not one major ship has been sunk by horizontal bombing." He added that his was an eyewitness account, not a second hand story.

Actually, Thach attributed America's first major air victory to Navy carrier-based fighters, dive bombers and torpedo planes. He said since the Battle of Midway the Army has marked the Haruna as a "probable."

Queried by reporters on his opin-

ion of the Flying Fortresses' work over Europe, thousands of miles from his operations area, the veteran fighter pilot belittled the B-17 as a battle weapon. Long range bombers make excellent scouts and patrols but are "practically useless in battle," he contended.

"All major victories which have been won in the Pacific, whether by Japs or Americans, were won through use of aircraft carriers," he said. The Dutch East Indies were taken by carrier-based Zeros. The torpedo plane and the dive bomber carry the "knockout punch" after the fighters have cleared a path for them, he said.

"Give us a couple of dozen aircraft carriers, a properly balanced task force, sufficient Marines to make a landing, and we can cut a path across the Pacific to Japan itself and make it stick," he said.

When reminded that many Zeros had been reported shot down by Fortresses, he said "TBDs (some of the Navy's older torpedo bombers) also have shot down Zeros."

The Japs, he said, "started this war with a bigger Navy and more airplanes"

than the U. S., and he believes they are working harder than we are.

"But we can build a fighter superior to anything the Japs have . . . We are already doing it."

Although pointing out that it was designed during peacetime and therefore not "a pure fighter," he lauded the Wildcat and other American carrier planes. He told of his own Grumman, badly shot up, taking him back to his base without any oil in the engine, although it still ran smoothly. He admitted, however, that the Zero can "turn inside of any fighter we have."

"Had we built a pure fighter, built for no purpose but fighting, at the expense of everything else (armor, etc.), it would have raised a squawk in peacetime," he said. He indicated he would be willing to do without some safety precautions for better maneuverability, but demanded leak-proof tanks since they add no weight over metal tanks.

Designers and manufacturers of carrier planes were gratified that their ships were getting a share of praise for battle accomplishments. One official of Grumman Aircraft Engineering Corp., commenting on Thach's interview, said:

"The Grumman Wildcat, the Navy's standard carrier-based fighter, has been proving by its records of planes shot down in all Pacific engagements, its superiority to all comers, land-based fighters not excluded. As a matter of fact, the Navy's Wildcat, with its (censored) has an altitude advantage over most of our land-based fighters now on fighting fronts. We have for some time been trying to dispel the general impression of the 'inferiority of carrier-based fighting planes' of our Navy, particularly when manned by such pilots as Thach, O'Hare, McClosky, and many others."

Repercussions of the press conference were intensified in the light of the Army's feeling that its accomplishments at Midway were more impressive than Navy press announcements made clear, and the Navy's claims that Army planes were relatively impotent as against Navy craft. Navy men contend that it is impossible to assay damage from a high-altitude bomber, and that it is also impossible to distinguish accurately

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Official U. S. Navy Photo

Deadly Trio: Lieut. Comdrs. Edward H. O'Hare (left) and John S. Thach, shown "somewhere in the Pacific," in front of the Wildcat in which O'Hare shot down five Jap planes.

Army Planes Scoring Over Enemy 3 to 1

House Committee Issues Report To Defend Craft

ARMY combat aircraft are knocking down two or three enemy planes to every AAF plane that is lost, the only kind of scoring which counts.

Our military planes "are more than a match for any of the planes that are now pitted against them."

Our pilots are performing "exceptionally well" and our AAF commanding officers are "fully alert to the lessons in combat that are being learned."

These conclusions, along with the warning that as we penetrate deeper into enemy territory our aircraft losses will increase, mark the highlights of an interim report released Oct. 5 by the so-called Harter Committee, an aviation subcommittee of the House Military Affairs Committee. The full committee is continuing its investigation of the entire war program.

The report makes public for the first time certain results of actual combat by Army planes against the enemy, on all battle fronts.

A digest of the report follows:

Recently there has been criticism of combat aircraft of the Army Air Forces, particularly fighters. Wide publicity has been given this complaint, which has led to confusion in the minds of the public. . . . In order that Congress might have the whole truth about our airplanes, their quality and performance, and through the Congress the American people, Special Committee No. 1 of the House Military Affairs Committee has conducted in the last two weeks a searching investigation with reference to the combat aircraft of the Army Air Forces in comparison with the aircraft of our Ally, Britain, and the aircraft of our principal enemies, Germany and Japan.

The Committee has heard Lieut. Gen. H. H. Arnold, Commanding General, Army Air Forces, as well as Maj. Gen. Oliver C. Echols, Commanding General, Materiel Command of the Army Air Forces, which branch is charged with the planning, design and procurement of military aircraft for the Army. Gen. Echols returned from England in mid-September and his very recent visit to that zone of operations, his familiarity with the latest English and German planes which are now being used in combat, and his first-hand knowledge of how our planes are performing in the theater of war over occupied Europe, was most enlightening to your Committee. Robert A. Lovett, Assistant Secretary of War for Air, provided detailed information relative to the operation of American-built airplanes manned by American pilots in numerous combat zones all over the world. Included in this report are official figures showing enemy losses and our own in actual combat since early this year.

T. P. Wright, former chief engineer



Defend U. S. Planes: Members of the aviation subcommittee of the House Military Affairs Committee, whose report defends U. S. combat aircraft. Left to right are Charles H. Elston (R., Ohio); Leslie C. Arends (R., Ill.); Dow W. Harter (D., Ohio), chairman; Andrew Edmiston (D., W. Va.) and Overton Brooks (D., La.).

for Curtiss-Wright and now Deputy Director of Aircraft Production of the War Production Board, who is considered one of the best informed aeronautical engineers of this country, furnished your Committee with very valuable information in the comparison of enemy types and our own.

The Committee also heard the testimony of Col. Walter C. Sweeney, Jr., Commander of our squadron of B-17s, the Flying Fortresses in the Battle of Midway. It also had the advantage of the testimony of Lieut. Col. Boyd D. Wagner, a fighter pilot and American Ace, who has had wide experience in actual combat operations in the Southwest Pacific.

Other witnesses and testimony received by the Committee fully confirmed the statements made by the foregoing witnesses, all of whom might be said to be experts in the field of military aviation, including among their number not only those familiar with design and production but top notch flyers who have commanded squadrons during some of the most important air operations during this war and who have had much combat experience. . . .

Before considering in detail the record and performance of U. S. Army

aircraft in combat, it seems desirable to spend a moment on the explanation of how an Air Force is planned and how the elements of an Air Force are selected for their specialized tasks.

Our Air Force is planned as a balanced team and it is designed for use as such. In this respect, it is exactly analogous to an Army Corps in which there are Infantry, Artillery, Armored Force, Motorized Units, Chemical Warfare and Engineer Corps troops. A typical balanced Air Force includes fighter teams generally sub-divided into three categories:

Names Categories

(a) medium altitude fighters especially designed for close ground troop cooperation and combat at low and medium altitudes; (b) fast climbing high altitude interceptors; (c) and fast high altitude top cover fighters. There are attack bomber groups, including both level and dive bomber units, medium bomber groups and heavy bomber groups.

It has been the contention of the Army Air Forces that modern use of aircraft requires its employment en masse and continuously concentrating large forces against single objectives until they are reduced. The use of a

balanced air force is of the greatest importance since any effective military plane is of necessity a compromise.

Each plane must represent a selection of characteristics and a choice as to the proportion of fire power, armor, speed, climb, ceiling, maneuverability and ruggedness.

No single aircraft embodies all of these desirable traits—hence the necessity of producing specialized planes to obtain the most desirable fighting qualities under all circumstances.

Describes Fighters

In the fighter group, the medium altitude fighters designed for close ground troop cooperation are the P-40 and the P-39 carrying the heaviest aircraft cannon of any plane in production. The fast high altitude interceptors, with a high rate of climb, are the P-38s. The top cover fighters are represented by the P-47 type which like the P-38 is supercharged, giving it greater speed at high altitudes and in addition considerable staying power.

Typical of the attack bomber, the light bomber, is the A-20 level and glide bomber, and the Army A-24 type dive bomber. Medium bombers are the B-25 and the B-26, and the heavy high altitude, long-range bombers are the B-17 and the B-24.

Production of this planned team was well advanced at the outbreak of war with the exception of the P-47, which is just now coming into quantity production. As a result of the global character of the war and the urgent requests from our Allies for aid, it became necessary and desirable to abandon the cardinal principle of the successful use of an Air Force and to send to fronts all over the world equipment by every possible means.

Australia, China and India successively had to be defended, and the shortage of shipping and the rapid advance of the enemy fleet made it virtually impossible to place a balanced team in the field in the first few months following the declaration of war.

On 9 Fronts

Nevertheless, against seemingly impossible difficulties, the Army Air Forces moved substantial numbers of aircraft to all parts of the world and units were built up which completely encircle the globe. Today the United States Army Air Forces are engaged on nine fronts around the world. Every flying day Army aircraft manned by American crews are in combat with the enemy in the Aleutians, New Guinea, Solomon Islands, Australia, China, India, Egypt, England and Iceland.

In addition, planes in quantity must be maintained in Hawaii, Panama Canal Zone, Caribbean bases and in strategic areas in the continental U. S. & Alaska. . . . In every one of these theaters, with the varieties of climate, terrain & weather encountered, Army aircraft are today meeting the enemy and beating them in virtually every engagement.

It is clear that when one is maintaining a piece of fighting mechanism half way round the world. . . . the problem of maintenance requires that planes of a single type be introduced into the area initially. Otherwise the complications of maintenance and spares would be insuperable. By standardization of types in a theater it is possible to use the parts of one damaged plane to repair another, thereby producing an op-



Douglas A-20s Rolling Off the Assembly Line
Harter Report Calls It a Typical Light Attack-Bomber

erational fighting plane. As the units grow new types are fed them . . . The P-40 and P-39 have had an excellent record of performance in widely differing theaters and their record in combat is the most convincing answer to the criticism that they are "inferior."

The figures of actual combat results showing the number of enemy planes destroyed, follows:

(a) From February 1 (date at which accurate breakdown figures by type of planes started) through Sept. 20: Enemy planes destroyed in combat by Army aircraft for all types on all fronts—279. U. S. planes destroyed in combat on all fronts—114. (b) For the month of August only: Enemy planes destroyed in combat—75. U. S. Planes lost in combat—15. (c) For the month of August: P-38s destroyed in combat 19 enemy planes with a loss of four P-39s. For the same period P-40s destroyed 18 enemy planes in combat with a loss of two P-40s. (d) In the 30-day period Aug. 14 through Sept. 14: The ratio of enemy planes destroyed to U. S. losses in combat was 7.5 to 1. The precise figures are not disclosed in this instance only because the information is sufficiently new as to be of possible use to the enemy. During this period the P-39s destroyed 20 enemy planes with a loss of five and the P-40s destroyed 14 enemy planes with a loss of one.

'Complete Answer'

This record should be a complete answer as to the fighting qualities of our planes.

We have been reluctant to disclose these figures: first, because they may be of some possible value to the enemy, and second, and more important, they may lead the public to feel that this is a normal ratio. In our opinion this is not the case and we feel that it would be a mistake for the public to lose sight of the fact that as we go further on the offensive in the air the ratio of our losses must inevitably increase. This is obvious when one considers that the deeper one penetrates into the enemy's country the longer the period of combat over hostile territory will be. Both the British and German experience has indicated that aerial offensives are costly and we feel a heavy responsibility to point out these facts at the same time as these unusually favorable figures are released.

We are confident that the American public has the courage and the understanding to accept the inevitable losses which must be taken in warfare, provided false hopes are not raised.

There have been frequent statements that the Japanese Zero plane is a better fighter than the P-39 & P-40. The Zero has certain better flying characteristics (such as faster climb, higher ceiling and greater maneuverability), but the P-40 has a number of better fighting characteristics (greater fire power, heavy armor, leak-proof tanks, higher speed and greater diving ability) which make it effective against the Zero. The Zero is an excellent flying machine and a relatively poor fighting machine. The Zero acquires its exceptional flying characteristics by decreasing its fighting capabilities. Conclusive judgment as to whether a fighter plane is good must in fairness depend on whether it wins or loses in combat with the enemy . . .

There has been presented to this Committee evidence that our pilots prefer the P-40s as fighters largely because, in the words of one of the leading fighter pilots who has been through the entire war to date in the Southwest Pacific, while our P-40s and P-39s were inferior in climb, maneuverability & ceiling, "we had superior fire power in all of our fighters over the Zero. Our airplanes were more rugged, were able to absorb a tremendous amount of enemy

fire, were equipped with leak-proof fuel tanks and had armor plate for the protection of the pilots, and were faster, especially in dives. The fact that our airplanes were equipped with armor plates and leak-proof tanks saved the lives of many pilots. The Jap Zero has no leak-proof fuel tanks or armor for the protection of the pilot and is lacking in fire power. It follows as a matter of course such protection has greatly increased the morale of the men of our Air Forces.

Witnesses from the AAF have stated that while the box score is in their opinion a conclusive answer to the loosely made charge that our planes are "inferior," they have been reluctant to use the box score because they feel that the record may lead the public to have false hopes for the future.

With respect to our bomber types little need be said, since their record to date has been so outstanding as to silence criticism. The B-17 continues today to be the fastest high altitude long-range bomber in production in the world. Its record of defensive combat demonstrates that it is the most heavily armed bomber in current operation. Recent combat experience in daylight raids over Europe have given us conclusive proof of the superb fighting characteristics of this heavy bomber and reports from the Middle East confirm the same capabilities in the B-24 type. (At this point a quotation from Colin Bednall London Daily Mail, on B-17 performance in Europe was introduced).



Republic P-47
'Top Cover Fighter'

In conclusion, it is the considered opinion of your Committee that the aviation industry is performing an outstanding service. It has expanded from an industry that received orders for a few hundred planes annually to one that must produce thousands of planes monthly. It has done a superb job. Much of our progress in the science of aeronautics has come through the research and development efforts of the airplane and engine manufacturers themselves. They have been aided greatly by the testing laboratories and the research of NACA, and through the experimentation and

applied research carried on by the Materiel Command at Wright Field. The airplane is too new a weapon of warfare to permit the freezing of models for extended production for any great length of time. It is a constant and continuing struggle between our enemies and ourselves to design and produce superior types of military aircraft. Moreover, battle experience necessitates change orders in models on the production line. These alterations are the result of the experiences of our pilots in actual combat. One of the best examples of this is the P-40, which has progressed through Series B, C, D, E, and is now being produced in its latest design as Series F.

We commend the policy of the Army Air Forces Command in sacrificing some speed and maneuverability to the safety of our pilots and their crews through the installation of protective armor and self-sealing gas tanks. While the sacrificing of armor, fire power and self-sealing tanks may cause a slight gain in climb or maneuverability for certain types of fighters, these advantages so gained are nullified by the effectiveness of sturdier and better equipped planes in our all-out fight against the Axis powers. Our high altitude four-engine heavy bombers, the B-17s and B-24s, are not equalled by any planes being produced by any other nation in the world. They are the only bombers that are able to do day-time precision bombing over occupied Europe and Germany. Their

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Harter Lists Army Aircraft

U. S. Designation	Description	Power Plant	British Designation
FIGHTERS			
P-38	Lockheed, 2 engine, single place, high-altitude.	Up to and including P-38G model, powered with Allison liquid cooled engine.	P-38, Lightning I P-38D, Lightning II P-38E, Lightning P-38F, Lightning Airacobra
P-39	Bell, single-engine, single place medium-altitude.	All P-39s up to P-39Q model, powered with Allison liquid cooled engine.	
P-40	Curtiss, single-engine, single place medium-altitude.	P-40, B, C, D, and E models, powered with Allison liquid cooled engine. P-40F model powered with American built Rolls-Royce liquid cooled engine.	P-40B, C Tomahawk P-40D, E Kittyhawk P-40F, Warhawk
P-47	Republic, single-engine, single-place, high-altitude.	All P-47s up to P-47G powered with Pratt & Whitney air cooled engine.	None
P-51	North American, single-engine, single-place, medium-altitude.	Powered with liquid cooled Allison engine.	Mustang
LIGHT AND MEDIUM BOMBERS			
A-20	Douglas, 2-engine, multi-place, medium-altitude, horizontal light bomber.	All A-20 incl. A-20G models powered with Wright air cooled engine.	(A-20A, B, C) Boston III, Havoc II
A-24	Douglas, single-engine, single place, low altitude, dive bomber.	All A-24s (A & B models) powered with Wright air cooled engine.	SBD, A-24
A-25	Curtiss, single-engine, 2 place low altitude, dive bomber.	Powered with Wright air-cooled engine.	None
A-28A	Lockheed, 2-engine, multi-place, medium-altitude, horizontal, medium bomber.	Powered with Pratt & Whitney air-cooled engines.	Hudson IV
A-29	Same as A-28A.	All A-29s (A-29 & A-29A models) powered with Wright air-cooled engines.	Hudson III
A-31	Vultee (Northrop) single engine, 2-place, low altitude dive bomber.	Powered with Wright air-cooled engine.	Vengeance
B-25	North American, 2-engine, multi-place, medium altitude, horizontal, medium bomber.	All B-25s (B-25, A, B, C & D models) powered with Wright air-cooled engines.	None
B-26	Martin, 2-engine, multi-place, medium altitude, horizontal, medium bomber.	All B-26s (B-26, A, B, & C models) powered with Pratt & Whitney air-cooled engines	Marauder
HEAVY BOMBERS			
B-17	Boeing, 4-engine, multi-place, high-altitude, horizontal, heavy bomber.	All B-17s (B-17, B, C, D, E, & F models) powered with Wright air-cooled engines.	Fortress
B-24	Consolidated, 4-engine, multi-place, high-altitude, horizontal, heavy bomber.	All B-24s (B-24, A, C, D & E models) powered with Pratt & Whitney air-cooled engines.	(B-24A, C, D, E) Liberator I or II

New AAF Paper Beats 'Censorship'

With the recent "censorship" which has been clamped down by Washington's ground-minded War Department public relations bigwigs on Air Forces press releases, aviation writers throughout the country are welcoming a new AAF organ, *Air Force*, which will have a print run of more than 260,000 copies a month, and become the official voice of Army aviation.

The paper, to be printed on letter press and given the status of a service journal, replaces the multilithed *Air Forces News Letter*. The *Letter* never was granted official standing.

A new Air Force Editorial Office has been opened in New York City, at 101 Park Ave., under Maj. James H. Straubel, formerly with the *Milwaukee Journal*, and *American Aviation Daily*, and managing editor of *AMERICAN AVIATION* before he entered the service. The office is part of the AAF Materiel Center.

It is anticipated that the publication will be widely quoted since its contents will be planned with the public as well as AAF personnel in mind. With dissolution of Col. Arthur Ennis' Air Forces public relations unit recently, news releases about the AAF now are averaging less than one every four days. Several are killed every week by the ground officers in charge of the bureau, who feel that the air arm of the Army should not receive any more publicity than ground forces. These ground-minded public relations chiefs point out that the entire department is issuing only a fraction of releases it was preparing two months ago, in line with OWI Chief Elmer Davis' general request to all government agencies for fewer handouts.

McDuffie Commissioned

William C. McDuffie, a director of Vultee Aircraft, Inc., and of Consolidated Aircraft Corp., has been appointed director, Ninth Service Command, Field Service, Army Specialist Corps, with the rank of colonel.

Gen. Arnold Receives DSM for Australia-U. S. Flight

Lieut. Gen. Henry H. Arnold, Commanding General of the Army Air Forces, was awarded the Distinguished Service Medal on Oct. 2 at Bolling Field, D. C., after completing a flight from Brisbane, Australia.

His total elapsed time on the trip was 77 hrs. and 14 min.

Gen. Arnold made the estimated 6,500 miles from Brisbane to San Francisco in 35 hrs. 53 min., breaking by 57 min. Lieut. Gen. George H. Brett's previous speed record of 36 hrs. 10 min.

Ten officers and four enlisted men who accompanied Gen. Arnold were awarded the new Air Medal for "exceptional professional skill, courage and endurance."

Assistant Secretary of War for Air Robert A. Lovett made the presentations, while Maj. Gen. James A. Ulio, Adjutant General, read the citations.

Gen. Arnold's flight was made in a C-87, the new cargo version of the four-motored Consolidated B-24 bomber. He had high praise for the durability and flight performance of the plane.

The two-week tour made by the AAF Commanding General covered 22,000 miles of the South Pacific and afforded him a first-hand view of United States aircraft in action. He consulted with Pacific Fleet Commander Chester W. Nimitz and Southwest Pacific Commander of U. S. Forces Robert L. Ghormley while on the trip.

Landing in San Francisco Arnold stated: "Our fighter planes are doing a splendid job. In combat they are bringing down an over-all average of two and a half Zeros to one of our planes lost. In August this average took a tremendous leap of five to one."

"Our bombers in the South Pacific are in a class by themselves. Pilots swear by the Flying Fortress and the B-24s. The Flying Fortress is the toughest plane in the air, as has been proved time and again in Java,

the Solomons, and recently, in Europe."

As Arnold alighted at Bolling Field he said the flight proved the "strategic mobility of long-range Army aircraft."

Officers who accompanied General Arnold on the flight from Australia were:

Brigadier General St. Clair Streett, Colonel William L. Ritchie and Colonel C. P. Cabell; Major Robert Alva Ping, Major Charles F. Stanell, and Major C. A. Peterson; Captain Marshall A. Elkins and Captain Robert F. Arnoldus; First Lieutenant E. A. McCabe, and Second Lieutenant Carl A. Hansman.

The enlisted men were: Staff Sergeant Robert A. Rhodes and James W. Hemenway; Sergeant Robert Fulton, and Corporal Robert Kanepi.

Civilian Ferry Pilots

Essential, SSS Rules

Civilian pilots employed by the ferrying division of the Air Transport Command are engaged in an essential occupation "which requires a high degree of training, qualification, or skill, and which must be filled by persons capable of performing the duties involved in order that the activity may be efficiently maintained." Selective Service System has stated.

The War Manpower Commission, the bulletin explained, has certified that the ferrying of aircraft "is an activity necessary to war production."

In classifying these civilian pilots, local draft boards are instructed to consider the following: (a) training, qualification or skill required for the proper discharge of the duties involved in their occupation, (b) training, qualification or skill of the registrant to engage in his occupation, and (c) availability of persons with his qualifications or skill, or who can be trained to his qualification, to replace the registrant.

Lt. Gen. Brett Awarded DFC

Lt. Gen. George H. Brett was awarded the Distinguished Flying Cross on October 6 "for heroism and extraordinary achievement while participating in aerial flights from September 1941 to September 1942."

Gen. Brett already holds the Distinguished Service Medal, which was awarded to him on June 25, 1940, for "exceptionally meritorious service" as U. S. Army member of war councils in England, Egypt, Burma, China, Java and Australia, and as Deputy Commander of the Southwest Pacific Theater of Operations. On August 3, 1942, Gen. Douglas MacArthur awarded him The Silver Star for "gallantry in action."

The DFC was presented to Brett by Army Air Forces Commanding General Henry H. Arnold.

Until recently Brett was Commander of the Allied Air Forces in the Southwest Pacific Theater. He received this appointment on April 17, 1942, and held it until last month when he was relieved of duty and succeeded by Maj. Gen. George C. Kenney. Since Brett's return to this country he has been in consultation with the War Department and has made a number of personal speaking tours. To date no announcement of his future assignment has been made.

Collier Trophy Group Announced

Announcement of the membership of the 1942 Collier Trophy committee was recently made by Gill Robb Wilson, NAA president. This trophy is awarded annually for "the greatest achievement in aviation in the United States, the value of which has been demonstrated in actual use during the preceding year."

Members of the Executive Committee are: Lieut. Gen. H. H. Arnold, Frank W. Caldwell, Donald W. Douglas, William R. Enyart, Maj. Lester D. Gardner, Dr. George W. Lewis and Glenn L. Martin.

W. P. Redding is acting chairman of the committee to select the winner of this award. Members are: Lieut. Col. Harry G. Armstrong, Dr. Walter M. Boothby, Col. Albert F. Hegenberger, Maj. E. L. Hoffman, Howard Hughes, Charles L. Lawrence, Grover Loening, Maj. W. Randolph Lovelace, William P. MacCracken, Jr., Dr. Sanford A. Moss, Harold F. Pitcairn, Juan T. Trippe, Col. J. G. Vincent, Gill Robb Wilson, ex-officio, Orville Wright and Clarence M. Young.

Newton Joins Chamber

Robert P. Newton, of Washington, was elected senior vice president of the Aeronautical Chamber of Commerce at a recent meeting of the Board of Governors. Prior to his association with the Chamber, Newton was assistant chief of the Bureau of Priorities, WPB.



Honors: Left, Gen. Arnold receives the DSM from R. A. Lovett, Assistant Secretary of War. Above, Arnold displays his medal. Left, Air Medals for the crew.



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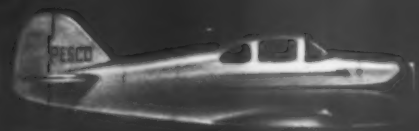
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"... nor will this global storm deter our forward flight."

PUMP ENGINEERING SERVICE CORP.—DIVISION OF BORG-WARNER—CLEVELAND, OHIO

now, and in the future—PESCO pump performance excels



LITHO IN U.S.A.

Day after tomorrow may be too late

A huge four-engine flying boat lifts itself from the sea and roars out over the embattled Atlantic . . . here today, Europe tomorrow . . . and the men who fly it are helping to fight this war.

For some messages must be delivered face to face. The ability of some one in Washington *today* to meet some one in London *tomorrow* is a vital necessity.

Those who pilot overseas transport planes are fighting shoulder to shoulder with the heroic men of the Merchant Marine in the great battle of transportation — the battle that must be won in order that the United Nations can win the war.

With new long-range flying boats setting new records for Atlantic crossings, men of American Export Airlines are helping to cut down the distance between America and her fighting allies.

With new fast cargo ships plying the sea lanes, men of American Export Lines are helping to speed the flow of war matériel to the fighting fronts of freedom.

American Export Lines Airlines

25 BROADWAY, NEW YORK

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FDR To Jump Production

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the materials and manpower problems facing the companies.

Plants visited were Ford's Willow Run, which reporters at the press conference were told is "ready" to start production; Boeing's, near Seattle, one of the Southern California plants of Douglas, and the Consolidated plants in California and Texas.

Company officials said the President and Donald Douglas conferred in the President's car for 20 minutes, discussing the major problems of the industry. It is understood that the President was informed as to the industry's ability to increase production if a coordinated flow of materials could be worked out, and also a plan to enable West Coast Federal officials to deal with emergency supply problems without going through Washington routine.

One company, the President was told, in a discussion of the pressing manpower shortage problem, in a recent month hired about 14,000 employees, of whom 11,000 were women, but the local draft boards have been raiding plant personnel at such a rate that the company is having serious difficulty sparing experienced workers who can train the recruits, most of whom have never been inside a shop or factory.

The President also revealed in his press conference that he had scaled down his 1942 goal for airplanes from 60,000 planes actually produced to attainment of a production rate of 60,000. He also contended that he had meant that the 1943 goal would be a Rate of 125,000 planes yearly instead of an actual output of that amount.

Questioned closely, he denied there was anything new in the interpretations of his January message to Congress, contending that it was all very clearly understood at the time. The industry, and WPB aircraft specialists, however, were taken entirely by surprise.

The Congressional message stated the 1942 objective as follows:

"To increase our production rate of airplanes so rapidly that in this year, 1942, we shall produce 60,000 planes, 10,000 more than the goal set a year and a half ago."

Asked if his latest estimate of the present progress of the entire war production program (94% to 95%) would apply to airplanes for 1942, he said no.

While on the subject of planes, he said the rate of trainer production will slow down from here on and their place will be taken by more necessary combat models.

Although the President cannot be quoted at press conferences, without special authorization, he said that the Boeing plant seemed to be in very good shape, working steadily and turning out planes at a very high rate.

He said the California Consolidated plant is stepping up production all the time.

Describing his tour through Consolidated's Texas plant, he said it is, he would say, just getting into production. But they are not anywhere near what they will be when they get parts from other plants. They aren't primarily a manufacturing plant, he explained to pressmen, but mainly assembly.

He also noted that the speed of production he saw at the Kaiser shipyards impressed his entire party.

In telling of the Alcoa plant at Vancouver, he said there doesn't seem to be much of a shortage of aluminum for planes at the present time, although there may be when the plane program gets bigger, as it will.

Labor and management are going along magnificently, he said, and the number of women he saw in war-plants was a constant source of amazement.

At Willow Run



Henry Ford and C. E. Sorensen Accompany FDR

At Boeing



Boeing President P. J. Johnson (rear, right) Explains

At Consolidated (California)



Presidential Party Sees Giant Patrol Bombers

At Consolidated (Texas)



George Newman, Consair VP, Talks to the President

Army-Navy Bulletins

New Maintenance School: Navy Dept. announces it commissioned the Naval Training School for Aviation Maintenance at Millington, near Memphis, Tenn., on Sept. 23. Capt. A. W. Radford, U.S.N., director of training in the Bureau of Aeronautics, and Lieut. Commander Richard P. Carlson, U.S.N., officer in charge of construction of the new school, were among those making addresses at the ceremonies.

Naval Officers Promoted: Temporary promotion of 150 naval aviators from the grade of Lieut. Commander to that of Commander has been authorized by the President, according to the Navy Dept. Included in the group are 138 officers of the regular Navy, and 12 from the U. S. Naval Reserve.

Construction Awards: War Dept. announces construction awards, as follows: an AAF installation at Scribner, Neb., to cost more than \$2,000,000; AAF installations at Fairmount, Neb., and Bruning, Neb., each to cost over \$2,000,000; AAF installation at Wilmington, N. C., costing more than \$2,000,000, and another AAF installation at Malden, Mo., to cost more than \$5,000,000.

Slight Fortress Damage: Since Feb. 1942, Flying Fortresses at Hendricks Field, AAF training center at Sebring, Fla., have made 32,219 landings, of which only eight resulted in "slight" damage to the bombers, War Dept. discloses. There were no injuries to personnel in these accidents.

New U.S.S. Yorktown: The aircraft carrier *Bon Homme Richard*, now under construction, will have its name changed to *Yorktown*, as a memorial to the ship which sank in the Battle of Midway, according to the Navy Dept. It will be the fourth ship and the second aircraft carrier to be so designated.

AAF Technician Insignia: War Dept. announces it has authorized a silver badge for enlisted technicians and mechanics. It is designed as a gear wheel, encircled by a wreath and surmounted by a four bladed propeller. Suspended from this wheel are one or more silver bars, which denote the technical skill for which the wearer qualified. Only enlisted men in the AAF will be awarded this new badge. Badges will be issued as soon as manufacturing arrangements are completed.

7 Naval Aviation Captains to be Rear Admirals



Capt. Mason

Capt. Read

Capt. Buckmaster

Capt. Montgomery

Capt. Wagner

Capt. Davison

Capt. Davis

In pursuance of the announced Naval policy of rapid promotions among aeronautical officers, President Roosevelt on Oct. 6 sent to the Senate the names of seven Naval captains whom he nominated as Rear Admirals.

The President also nominated Rear Admiral John H. Towers, recently made commander of all Naval aviation forces in the Pacific, for promotion to the rank of vice admiral, and asked the Senate to confirm Rear Admiral John S. McCain as successor to Admiral Towers to be Chief of the Navy Bureau of Aeronautics.

The seven captains nominated for read admiral rank were:

Albert C. Read, commandant of the Naval Air Station at Pensacola, Fla.; Charles Perry Mason, commandant of the Naval Air Station at Jackson-

ville, Fla.; Alfred E. Montgomery, commandant of the Naval Air Station at Corpus Christi, Tex.; Frank D. Wagner, director of the aviation division of the office of Naval Operations; Elliott Buckmaster, formerly commandant of the carrier Yorktown, Commandant of the Naval Air Station at Norfolk, Va.; Dewitt C. Ramsey, (not shown above), an important command at sea; Arthur C. Davis, an important command at sea.

Also promoted to rear admiral recently was Captain Ralph Davison who is assistant chief of the Bureau of Aeronautics. The Congressional Record states that all assistant Chiefs of Naval Bureaus have been promoted to the Admiral rank, but the Navy has not officially released the information.

Thach

(Continued from page 3)

between a cruiser and a battleship or between a cruiser and a destroyer.

Indicating the recency of the Navy's apparent decision to rid itself of an inferiority complex on the subject, Secretary Knox at a press conference less than three weeks before Thach's remarks had answered a reporter's query by pointing out that carrier planes were necessarily at a disadvantage in respect to landplanes because of heavier armor required. Another Navy official at the conference augmented Knox's explanation by saying that strong brake power and other extra gear of carrier planes made them less maneuverable due to structural reinforcements.

—R. H. W.

Landplanes Best, Harter Tells Thach

In a special interview with newspapermen upon release of his committee's report on the quality of our Army combat aircraft, Rep. Harter asserted that despite the recent comments by Lieut. Comdr. Thach and other Navy men, "Land-based bombers can't be beat," and hinted that there may be scheduled some kind of hearings in the future to study comparisons of Army and Navy planes.

He also said:

P-40 production is being tapered off while Curtiss-Wright prepares to build the Republic P-47.

Both the P-47 and the Lockheed P-38 are proving "very successful" and adequate for Army high altitude needs. The latter "will soon be heard from" flying with bombers over Europe.

The Bell Airacobra will fill middle altitude assignments.

The Allison is now a "very fine" engine.

Bell P-39 (Airacobra) deserves high praise.

"It's a hell of a job to build airplanes."

Lovett Denies Army Accidents Rising Rapidly

Since the Army does not withhold news of accidents from the press, such publicity has "created in the minds of some people the wrong impression that accidents are increasing at an alarming rate," Robert Lovett, Assistant Secretary of War for Air, has informed the Harter committee.

Lovett cited, however, the first seven months of 1942 showing that, although 45% more training hours were flown than during the entire 10 year period from 1930 to 1940, the accident rate per thousand hours flown was 15% lower than the 10 year average. No figures more

recent than July 31 have been issued by the department.

"Flying accidents naturally cannot be entirely eliminated, because military flying is a dangerous business. We feel sure the public is prepared for unavoidable accidents, but they are entitled to know that no pains are spared to keep accidents at the lowest rate consistent with the hazards necessarily involved," Lovett said.

New Brochure

Canadian Car & Foundry Co., Ltd., Montreal, has published an illustrated brochure featuring its production of Avro Anson, Hawker Hurricane, Curtiss dive bombers, and engines and propellers. The company is also promoting the fact that it is the "sole Canadian licensee under the basic Burnelli patents of the all-wing lifting fuselage principle."

Harter

(Continued from page 5)

ability to fly at much higher altitudes than any other bombers gives them the great advantage of being able to operate in the day-time, as they are above effective range of anti-aircraft fire and their heavy armor and effective fire power have made them more than a match for the German Messerschmitt and the newest German fighter, the Focke-Wulf 109.

Your Committee has endeavored to give you factual information concerning our Army planes. It is our belief that they are more than a match for any of the planes that are now pitted against them. There is an old saying: "The proof of the pudding is in the eating thereof." In the final analysis, it is the box score that counts. It is idle to compare the speed, performance and maneuverability of one plane against another when engaged in war. These in actual combat are academic questions. It is only common sense to say that our planes and our pilots are performing exceptionally well when they are knocking down two or three enemy planes to every one of ours that is lost. Your committee finds that our planes are not inferior to those of Germany and Japan. We also find those in command of our Army Air Forces fully alert to the lessons in combat that are being learned and ready to make such changes as experience dictates.

The American people may be justly proud of the record of its AAF, their achievements and their will to bring this war to a speedy and successful conclusion.

Navy Fliers With Lines as Co-Pilots

The Navy Dept. has made available to the domestic airlines "trained and experienced Naval and Marine flight officers" to augment the companies' co-pilot staffs, according to Walter Addems, United Air Lines' director of flying.

These flight officers are studying airline operating practice. They are being assigned to flights commanded by veteran UAL captains, Addems said.

U. S. Aircraft in RAF

Bombers

Baltimore (Glenn L. Martin 187)
Boston (Douglas DB-7 and DB-7B)
Fortress (Boeing B-17C and B-17D)
Liberator (Cons. B-24D)
*B-25 (N.A. B-25)
Maryland (Martin 167)
Marauder (Martin B-26)

Coastal

Hudson (Lockheed B-28, B-29)
Liberator (Cons. B-24)
Ventura (Lockheed 37)
Catalina (Cons. PBV5)

Fighters

Buffalo (Brewster FA-2)
Havoc (Douglas DB-7 and -7A)
Kittyhawk (Curtiss P-40D)
Mohawk (P-38)
Tomahawk (P-40B)
Mustang (N.A. P-51)
Airacobra (Bell P-39)

Trainers

Harvard (N.A. 66 or N.A. 16)
Piper Cub
Taylorcraft

Transport

Douglas DC-3
Lockheed 14
Lodestar (Lockheed 18)

* Not yet in operation.

Lockheed Lightning P-38; Vultee Vengeance V-72; Republic Thunderbolt P-47 have been detailed for service with the RAF, but are not yet reported in operation.

U. S. Aircraft in Fleet Air Arm

Fighters

Marlet (Grumman F4F Series)

Light Reconnaissance

Kingfisher (Vought-Sikorsky OS2U-3)

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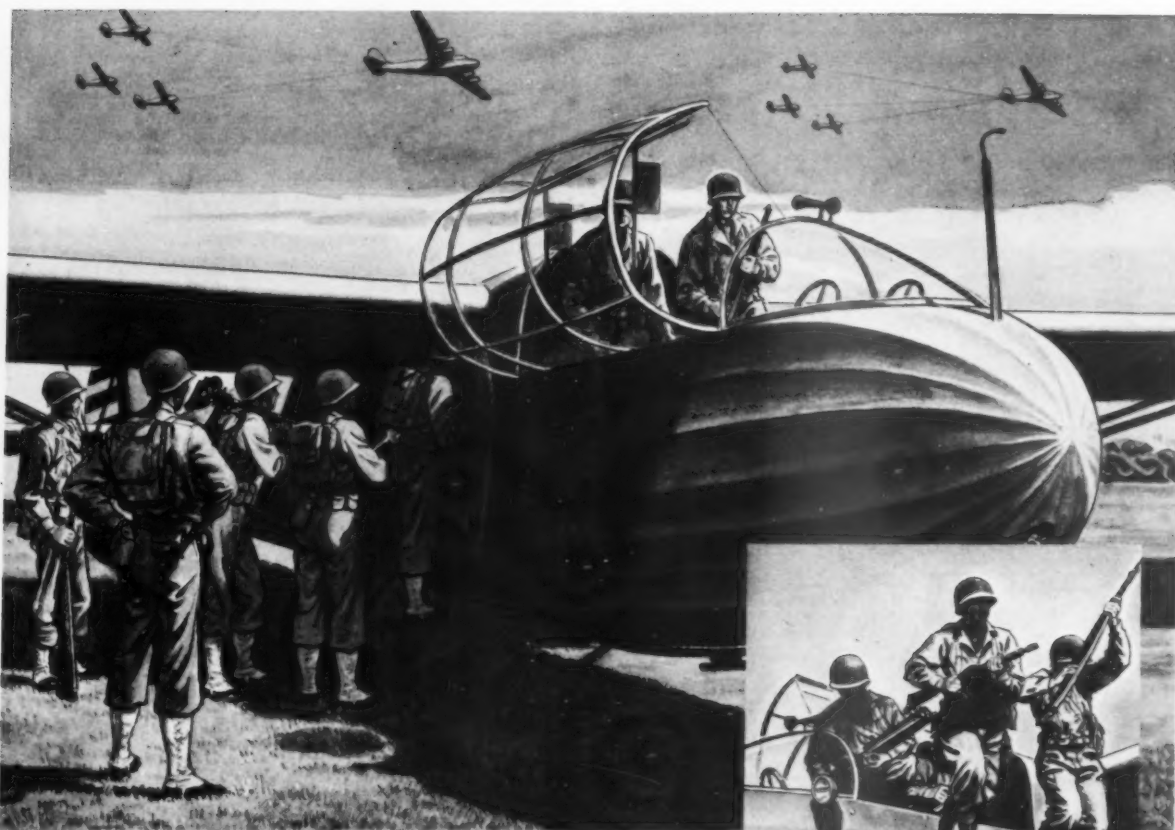
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Tons against Time

Rails end . . . seas have shores . . . but cargoes sent by air go directly to destination without transshipment. For swift tonnage transport which reaches everywhere, Wright engines supply the power.

WRIGHT *Aircraft Engines*
POWER THE TONNAGE OF THE AIR



Part of a task force boards a nine-place glider. Many makes of these new craft are being fabricated with Boots Self-Locking Nuts.



They arrive, all set to take over. This is the way glider troops will soon be carrying out assignments on many fronts.

Glider Assignment

The entire line of Boots Self-Locking Nuts is carrying out an important assignment with spectacular effectiveness in the rapidly expanding glider industry.

This is particularly true of the Boots "Cage" Nut. Specially devised for use in building planes of plywood and plastics, this recent addition to the Boots family has proved itself indispensable in attaching glider fillets and fairings, in mounting instruments to dashboards, and in many other applications requiring a positive self-locking device. The "Cage" Nut combines the fa-

miliar Boots all-metal Wing Style Nut with a special base designed to be clinched permanently into the plywood. Applying it is a *one man* operation, as it can be clinched in from *one side*. Its grip is so firm that it withstands—without tearing the plywood—the torque of bolt or screw insertion when applied by production methods.

In short, the "Cage" Nut is making possible increased substitution of plywood for vital aluminum on many aircraft applications. Remember, Boots Nuts "Outlast the Plane." Send for new catalogue today.

General Offices
New Canaan, Conn.

BOOTS

AIRCRAFT NUT
CORPORATION



The Boots "Cage" Nut, ready to fasten plywood sub-assemblies for faster production.



The special tool for fastening the "Cage" Nut to the plywood.



When applied, the "Cage" Nut grips the base sheet of plywood permanently. Now it is ready to be bolted to adjacent part of the plane.

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SAE Meeting

Adaptation of fuels and lubricants to the requirements of severe operating conditions of warfare will be discussed by aeronautical, automotive and petroleum engineers at the National Fuels and Lubricants Meeting of the Society of Automotive Engineers, to be held Oct. 22 and 23 in the Tulsa Hotel at Tulsa, Okla.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of American Aviation, published twice a month, at Washington, District of Columbia for October 1st, 1942, (with additional entry at Harrisburg, Pa.)

City of Washington } as:
District of Columbia }

Before me, a notary public in and for the district aforesaid, personally appeared Thomas E. Lindsey, who, having been duly sworn according to law, deposes and says that he is the Business Manager of American Aviation and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Wayne W. Parrish, editor and publisher, 1317 F Street, N. W., Washington, D. C.; editor, Wayne W. Parrish, 1317 F Street, N. W., Washington, D. C.; managing editor, Eric Bramley, 1317 F Street, N. W., Washington, D. C.; business manager, Thomas E. Lindsey, 1317 F Street, N. W., Washington, D. C.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

American Aviation Associates, Inc., 104 Telegraph Building, Harrisburg, Pa.; Wayne W. Parrish, 1824 24th Street, N. W., Washington, D. C.; E. J. Stackpole, Jr., 104 Telegraph Building, Harrisburg, Pa.; A. H. Stackpole, 104 Telegraph Building, Harrisburg, Pa.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signed) Thomas E. Lindsey, Business Manager.

Sworn to and subscribed before me this 29th day of Sept., 1942.

(SEAL.) (Signed) Warren F. Johnson
(My commission expires Aug. 15, 1943).

War Agencies Review

FOURTH QUARTER AIRCRAFT MATERIALS are understood to have been allocated pretty much according to stated PRP requirements, although WPB Requirements Committee had to slash aircraft allocations along with all others in order to bring supply and demand into line. It is understood that aircraft took a less severe cut than other programs. WPB aircraft officials were able to proceed without cutting individual company allocations in proportion to the cut taken by the whole aircraft program, largely because excessive inventories and padded statements of requirements put the total requirements far enough in excess of scheduled production to make up the difference.

Next year's program hasn't yet been settled. Some officials are hinting at a program even bigger than the 125,000 planes earlier advocated by the President. Even allowing for the President's recent explanation that he meant a rate of 125,000 by the end of the year rather than that many planes for the year, there still is a big jump to be made from this year's schedules to next year's. Officials in Washington are confident the industry can take care of the job—provided Washington can give industry the materials.

So much material will mean taking a lot from other programs, including very essential war equipment programs. Washington men responsible for the aircraft program have had thus far a hard fight for almost all materials they have been able to get. They say that doubling production next year requires one thing above all else—unqualified agreement among high authorities that the aircraft program must come first regardless of how it affects production of tanks, ships and ordnance. There are other questions, but this comes first and foremost. Officials indicate it will be several weeks before next year's program can be scheduled.

STABILIZATION OF AIRCRAFT WAGES rests pretty much in the hands of the War Labor Board. As expected, the anti-inflation law, and the President's executive order, gave NWLB power to make all final decisions on wage adjustments. Re-opening of West Coast aircraft stabilization conferences October 12 gives the industry, including both management and labor, opportunity to present NWLB a unified case for application to all workers in all West Coast airframe plants. Any wage adjustments resulting probably will be upward rather than downward, even though West Coast workers already have received increases exceeding cost-of-living increase since January 1, 1941. But general expectation is for "adjustment of inequalities" rather than for any general wage increase.

Big questions now is how final these adjustments are going to be. Labor and management officials, as well as the workers themselves, are watching NWLB for an indication of policy on pay raises through upgrading of workers. Also open to question is whether NWLB will permit periodic cost-of-living adjustments without application to the Board in case the cost of living isn't stabilized as effectively as wages.

WASHINGTON MANPOWER OFFICIALS are giving the aircraft industry rather good cooperation toward keeping essential men at their jobs, but criticisms are heard from both sides. Industry officials contend that policy on drawing off aircraft workers for military service is too loosely knit, permits local boards too much freedom to make their own decisions on who is important. Selective Service and WMC officials have been heard to say that the aircraft industry, like all other industries, is hoarding many workers under occupational deferments although the workers could be replaced in a few weeks. They also have made courteous accusations that the aircraft industry, or at least a majority of companies, have refused to anticipate the inevitable by replacing draft-eligible workers in advance of Selective Service calls.

Both sides would like to see clearly defined manpower control, by act of Congress and by establishment of a single, all-powerful manpower authority. Neither side expects decisive action from Congress in the very near future, although Congress will be talking more about manpower control than anything else for the next few weeks.

Aircraft officials seem to want more than anything else assurance that their really essential men won't be drafted and that their less essential men will be drafted in an orderly manner. Most Washington men want more or less the same thing. Nobody very much wants, or expects, actual job freezing. An effective compromise is expected to come in time, but not in time to keep a lot of important production men out of uniform.

Army-Navy Bulletins

U. S. French Training: Navy Dept. on Sept. 23 announced agreement on plans for cooperation of the Naval Aviation Service of Fighting France with the American Navy had been reached by U. S. and Fighting French Naval Authorities. A detachment of the Naval Aviation of Fighting France will complete its training at Naval aviation schools and bases in the U. S. These detachments, when training has been completed, will make up a French unit. With planes furnished by the U. S., it will perform in cooperation with United Nations Naval Air Forces.

Eagle Squadron Transferred: On Sept. 29 members of the famous Eagle Squadron changed from RAF command to AAF. In ceremonies on that date, the flyers paraded past Maj. Gen. Carl A. Spaatz, Commander of the U. S. Air Forces in Europe, from whom they now take orders. On Sept. 26 the German radio claimed that four members of the Squadron were captured after their planes were disabled. The Germans claimed the men were: Lieutenants Charles Albert Cook, Marion Jackson, and Edward Gordon Bretell, reported wounded, and George Sperry.

B-17s Startling Britons & Nazis, Londoner Writes

Believed to be unparalleled in recent years, the War Department issued a special press statement Sept. 27 calling attention to amazing praise of the Flying Fortresses over Europe, as published in the London Daily Mail.

In contrast to the persistent criticism of U. S. aircraft which has been streaming across the Atlantic from British shores, mainly from Peter Masfield, associate editor of *The Aeroplane*, and writer for the *Sunday Times* of London, the *Mail's* article, by Colin Bednall, said the success of the U. S. Army's Flying Fortresses in Europe has been so remarkable that "it is likely to lead to a drastic resorting of basic ideas on air warfare which have stood firm since the infancy of flying."

"Up to now it has been generally accepted, especially in this country and in Germany, that no multi-engine plane could hope to stand against the small short-range single-engine fighter—the so-called 'Queen of the Air'."

Bednall said "no allowance for two vital factors" had been made in calculations in some British quarters where pessimism had been expressed concerning the effectiveness of Flying Fortresses in daylight operations.

These factors, he said, were that the Flying Fortress had more armament than the Lancaster and that "by operating in daylight it could bomb with extreme accuracy from great heights and therefore avoid much of the ground flak which night bombers have to penetrate because they must come lower to sight their targets."

"The Boeing Aircraft Co., which produced the Flying Fortress," he continues, "had made a daring experiment. The first models which were sent across to the RAF under lease-lend were still in an early experimental stage at that time. The Flying Fortress which the U. S. Army brought here this year was a very different proposition. It had won a fine reputation in the Pacific, but it had to prove itself in the much more highly developed air war of Western Europe before final conclusions could be drawn."

"Just how well it has established itself within the short space of a fortnight is now the subject of close study by startled experts on both sides of the English Channel. Here are some of the facts before them:

"1. The Fortresses have carried out considerably more than 100 offensive sorties against the enemy in daylight without the loss of a single plane. No other bomber has such a record in Europe."

"2. In the course of these operations they have destroyed or severely damaged at least 11 F.W. 190s—the cream of the Luftwaffe machines—which attempted to intercept them."

"3. Their bombing, all done from a great height, has been exceptionally accurate in every case."

Army, Navy Reorganize Public Relations Units

Consolidation of the various Army public relations units into one general public relations bureau was completed by the War Department on Oct. 1, deadline set by War-Secretary Stimson. Navy publicity changes are also announced.

Maj. Gen. Alexander D. Surles remains as director of the Army's bureau with Col. Stanley J. Grogan, former press branch chief, as newly created deputy director. Three assistant directors for the three branches of the Army have been created and the bureau now has four operating divisions. Reports are current that Surles will be transferred and his place taken by Grogan.

Col. Arthur I. Ennis, formerly chief of Army Air Forces public relations, becomes assistant to the director, for the Air Forces; Col. Falkner Heard for Army Ground Forces, and Lieut. Col. Armand S. Miller for Services of Supply. Each of these men has his own policy group.

The operations of the bureau have been divided into war intelligence, news, executive, and industrial service. Col. R. Ernest Dupuy, formerly chief of the planning and liaison branch, is head of the news section which is broken down into six branches, press, radio, pictorial, publication, analysis, and continental liaison; plus four sections, women's

interests, graphics, exhibits and speakers.

The war intelligence division, under Col. Francis V. Fitzgerald, consists of three branches—war, review, overseas liaison—and the committee for protection of information, which was established to clear war production data for Government agencies and to interpret Department policy on control of statistical information.

Col. Virgil F. Shaw heads the executive division containing the administration branch and two sections, branch offices and the Army emergency relief.

The industrial service division—production services, field operations and the awards section—is under Col. A. Robert Ginsburgh.

Many officers formerly in public relations have been re-assigned to duty with troops. The reorganization, planned for some time according to Mr. Stimson, was hastened by the recent mysterious air marker hoax story out of Mitchell Field. The real story behind this incident has never been printed. Elmer Davis, OWI chief, has waged a ceaseless campaign, since coming to Washington, to cut Army and Navy press releases or bring publicity of the services under OWI. He has succeeded in the former.

The Navy's public relations office



British Press Service.

RAF Regiment: Little publicized is the RAF Regiment, one of whose members is shown above in full battle dress. The Regiment has the responsibility of defending airports and RAF stations against enemy attack.

recently was placed under the direction of Capt. L. P. Lovette, who succeeded Adm. A. J. Hepburn, re-assigned. Comdr. Robert W. Berry has taken over Lovette's former position as assistant director of public relations. He was formerly an assistant to the director. Lt. Comdr. W. G. Beecher, Jr., is now assistant to the director and Frank E. Mason

Contract Airlines Get AA-1 Rating

Airline equipment used in connection with war contract operations hereafter will hold an AA-1 preference rating, replacing the A-1 rating previously in force.

War Production Board officials indicate that no official announcement of the change is to be made. The state, however, that Preference Rating Order P-47 has been amended to put war contract airline repair and maintenance equipment up on the top AA-1 priority level.

It is emphasized that the new rating applies only to equipment used in connection with Army contracts

has been named special assistant to the Secretary of the Navy.

Lt. Comdr. Paul C. Smith, formerly head of the press branch, has been put on inactive status by the Navy and transferred to the Office of War Information. His place in press has been taken by Lt. W. Marvin McCarthy. In charge of the Navy's magazine section is Lt. Comdr. V. F. Blakeslee.

Washington circles are speculating as to whether the Navy will elevate Lovette to the rank of Rear Admiral or whether the Navy feels the bureau is not important enough to the war effort to merit this rank. Lovette has had command of a capital ship which is the Navy's primary requirement for promotion from Captain to Rear Admiral.

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The Birdmen's Perch

Oh, see the little Major,
He's out upon a twig;
He promised to name Oily but
The job grew much too big.

The letters came in bunches—
The Major read and read,
He read while he was eating,
He read while in his bed.

He read under the shower;
He read the postal blitz
In restaurants and buses,
In Washington and Pitts.

The Major still is reading,
But takes time off to vow
That Oily will be christened
Just four weeks from now.



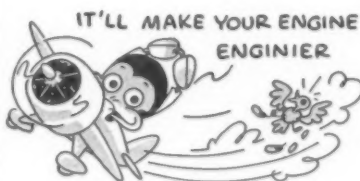
Major Al Williams

alias, "Tattered Wing Tips,"
Gulf Aviation Products Man-
ager, Gulf Bldg., Pittsburgh, Pa.

**MOIST, HAVE BEEN SOME THINGS
THEY WET**

Remember a while back, when scientists
discovered a way to make water wetter?

Well, Gulf's scientists discovered a way
to make oil *oilier* when they invented the
Alchlor Process. For no matter how good
the crudes, all oils contain molecules that
form carbon and sludge, in addition to
the molecules that actually lubricate.



Gulf's exclusive Alchlor Process gets
more of these carbon and sludge makers
out of Gulfpride than ordinary refining
techniques would, leaving Gulfpride an
oilier oil.

BRAINTWISTER (The Good Ferry)

The planes at Newfoundland Airport
were joined by 1 flight of 7 new planes
each day for a
week. After each
new flight arrived,
half the planes on
the field took off
for England. At
week's end, there
were 8 planes left
on the field.

How many were
there in the begin-
ning?

ANSWERS COST
ONLY A PENNY'S
WORTH OF POST-
CARD, FELLAS.



WHOPPER

Dear Major,

Recently one of the instructors went
fishing, carrying as always a small bottle
of Gulf Aviation Gasoline "for emer-
gencies." After fishing a while, he ran

out of bait and headed home to the
Station. Half a mile up the path he saw a
big snake with a frog in its mouth. He
walloped the snake with a stick, took the
frog, and started back to the river for
more fishing.

But the death struggles of the snake
were too much for his soft heart. Having
no water, he gave the snake a shot of



G.A.G. and returned to the river, feeling
a proper Christian.

He fished a bit before he felt a tug on
his trousers. He looked down to see the
same snake with another frog.

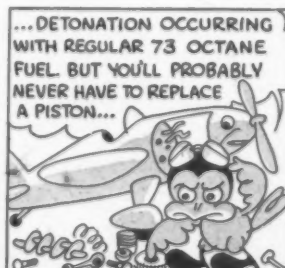
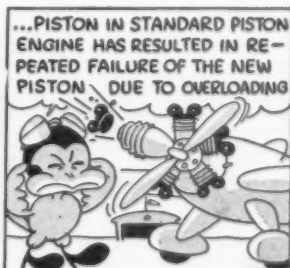
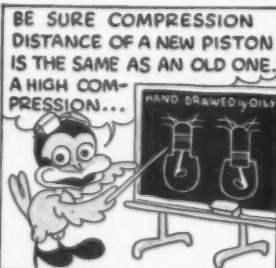
W. Bruce Haughton, Senior Instructor,
Airplane Phase, Navy Air Service School,
Florida

Gulf Oil Corporation and Gulf
Refining Company...makers of



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OIL IS AMMUNITION—USE IT WISELY!



Aviation Industry Watches Congress for Action on Manpower Legislation

Proposals Are Submitted to House, Senate

By KATHERINE E. JOHNSON

AVIATION industry employers anxious to keep essential men at their jobs watch Congress now for action on total manpower mobilization legislation which reportedly will make a bid for the spotlight shortly.

Statements by War Manpower Commission Chairman McNutt and other officials have made Senators and Congressmen aware of the necessity of "drafting" workers for essential industries and agriculture, as well as for the armed services.

Several manpower proposals have been made in both the House and Senate:

- (1) Companion bills authorizing the drafting of 18 and 19 year olds have been introduced by Sen. Gurney (D., S. D.) and Rep. Wadsworth (R., N. Y.) in the Senate and House, respectively;
- (2) Similar bills empowering the President to coordinate manpower for industry and the armed services have been introduced by Senators Hill (D., Ala.) and Austin (R., Vt.) and Rep. Priest (D., Tenn.);
- (3) A bill to assure sufficient farm labor has been introduced by Sen. McKellar (D., Tenn.).

Senate To Act

Action on the manpower problem, it presently appears, will emanate from the Senate rather than the House Military Affairs Committee. Although the government departments concerned have not yet submitted reports to either House or Senate Committee, several Senators are pushing for action.

Members Hill and Austin of the Senate Military Affairs Committee, state that they are laying plans for opening hearings on their bills. Both Austin and Hill indicate that they will wait a "reasonable" length of time for the departments to report and then will ask for hearings—without the customary departmental statements.

After a conference with Brig. Gen. Hershey, SSS director, and WMC Chairman McNutt, Sen. Hill, majority whip, said that both men, although not committing themselves to his particular bill, insist on the necessity of legislation which would assure proper quotas of manpower for industry, agriculture, and the armed services.

Along with total manpower mobilization legislation will be taken up the related proposal to draft 18 and 19 year olds. Although outspoken Sen. Gurney was blocked by

the Senate Military Affairs Committee a few weeks back when he fought for immediate consideration of such legislation, he has since stated that he believes that much of the opposition has lessened. At the time that Gurney was blocked he intimated to the press that Senators desired to postpone the draft measure until after the election.

"But Hitler and the Japs won't wait for the election," Gurney said at that time.

Subsequently Hill and Austin introduced their bills and Chairman Truman (D., Mo.) of the Senate Committee to Investigate the National Defense Program appointed a special subcommittee, headed by Sen. Kilgore (D., W. Va.) to look into the manpower problem. The Kilgore group is continuing its study and will probably have find-

ings to be taken into consideration in connection with proposed legislation. Both Truman and Kilgore are members of the Senate Military Affairs Committee.

On the House side, the Military Affairs Committee has scheduled no action on the Priest or Wadsworth bills.

The Tolan Committee (House Committee to Investigate National Defense Migration) is likely to oppose total manpower mobilization legislation in its next report—to be released shortly—statements by individual members of the group indicate. Such a stand would be consistent with that taken by the Committee in its last report, which claimed that manpower legislation is not necessary until all available sources of labor supply have been tapped.

Walsh Group Studies Renegotiation Changes

The Walsh subcommittee of the Senate Finance Committee completes its consideration of amendments to the contract renegotiation law amid predictions by aviation observers in Washington that other profit limitation legislation is "out" for the present session of Congress. The subcommittee will offer its amendments as "riders" to the tax bill toward conclusion of debate on that measure.

"Clarifying" amendments which have been suggested by the War Dept. are: (1) exemption from renegotiation of all contracts for raw

material and all subcontracts for standard commercial products; (2) authority for the government to give final clearance to contractors eliminating any further renegotiation; (3) exemption for contractors



Sen. Walsh

with less than \$250,000 in annual war production.

The subcommittee, headed by Sen. Walsh (D., Mass.), was appointed by Chairman George (D., Ga.) of the Senate Finance Committee, to formulate a profit limitation proposal in connection with the tax bill. George turned over his plan for a flat percentage overall limitation of profits on government business to the group for evaluation. There was, however, only approximately two weeks for consideration. All flat percentage profit limitation measures are strongly opposed by the Departments—War, Navy, Maritime, Treasury.

The George proposal needs "very careful" consideration, Chairman Walsh of the subcommittee remarked.

Previously, members of the Senate Finance Committee, including George and Taft (R., Ohio), had advocated replacement of the renegotiation law with another profit limitation measure.

Walsh said, however, that he has "reached the conclusion that the law should not be repealed at this time. . . ."

"I don't think a substitute law can be satisfactorily considered together with action on the pending tax bill," he added.

Both George and Taft have indicated that they will conform with the recommendations of Walsh's subcommittee.

"I am inclined to think, though my mind is open on the subject, that the present course to pursue is to continue the present renegotiation law with clarifying amendments that will define more accurately the administration of the law to the Secretaries of the Departments and define more accurately the rights of the contractors," Walsh stated. "There will not be time to map a law which will be acceptable to the departments and to war contractors."

The renegotiation law was tacked on to the Sixth Supplemental Appropriations Act by the Senate Appropriations Committee after pleas from WPB Chief Nelson to use it to replace the Case amendment approved by the House. The Case amendment would have placed a flat 6% profit limitation on government contracts.

Maloney Urges Air Committees

"I am among the many persons who have for a long time past been disturbed by newspaper and magazine articles, and other publications and statements dealing with our alleged delays and deficiencies in our military aviation," Sen. Maloney (D., Conn.) told the Senate recently.

He continued: "Men of established reputation insist that we are not properly keeping pace with our enemies, and those of them who appear to be well informed and particularly qualified to speak on the subject constantly deplore our lack of progress in this field."

"Members of the Senate know of proposals heretofore made that the Congress establish a department of aviation, and committees to deal with this tremendously important subject. I share the feeling of those who believe that we should have a separate air force, and I think it of paramount importance that such committees of the Congress should be created and assigned to deal exclusively with aviation."

Asks 4 Billion For Navy Planes

The President has asked Congress for a supplemental appropriation of \$3,822,000,000 for the Navy Bureau of Aeronautics.

The Naval appropriation is to be used for 14,000 fighter aircraft, it is disclosed. Informed members of Congress said that with the new funds the Navy would be given the finest type of fighter planes obtainable and that the new Navy carrier-based planes would be faster, carry more fire power and be capable of longer range fighting.

Sen. Truman Continues Fighter Plane Study

The Truman Committee is continuing its investigation of U. S. fighter planes and will make a further report on the subject, it is revealed.

Truman's statement that American fighter planes are "definitely on the mend," as interpreted by the press, gave many readers a wrong impression that Truman is "backing down" on his former statement that our fighters are inferior in certain respects, a committee spokesman points out. Neither Truman nor other members of the Committee are reversing their former position that there is room for improvement in the features of certain of our fighters. Committee investigators in Washington are now interviewing Army officers and other sources for additional data.

Truman made his statement that our fighters are "on the mend" after hearing testimony by Maj. Gen. O. P. Echols and other Army officers.

Housing Increased

Action has been completed on legislation increasing by \$600,000,000 the authorization for defense housing.

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Fortnightly Review

(Continued from page 1)

was not content to base a report on isolated statements. It heard every ranking expert in the Army Air Forces. The resulting document, describing each type of military aircraft and its performance so far in the war, is the most complete report to come out of Congress. It will stand the test of time. It will do much to counter the careless statements that have been made in Congress during the past four months, and should give real reassurance to the nation that our airplanes are not inferior, that our industry is not behind the parade of nations, and that the Army Air Forces built a balanced program to meet as many different combat situations as could be foreseen in the days of peace.

Priorities for Manpower

AS SOON as the November elections are over, the nation's manpower problems will have to come up for solution. Both the aircraft manufacturing industry and the air transport industry are facing disastrous shortages, all due to the confusion and inequalities existing in the Selective Service System.

The aircraft industry has priorities for everything except the one essential of manpower. Reports from the plants indicate that General Hershey's constantly changing policies and speeches have worked havoc on plant morale. It is all well and good to say that women can replace men in the factories, but someone has to supervise and train the new workers, and those who do occupy these supervisory positions should not be harassed by local draft boards.

Likewise the air transport industry is facing a tremendous

problem in its expanding operations for the Army. Where the necessary skilled personnel are going to come from is anybody's guess. The indiscriminate manner in which local draft boards have whisked into the service men holding vital positions in air transportation is not a pleasing commentary on a nation that is supposed to know how important production and transportation are to winning the war.

General Hershey may be well intentioned, but his administration of Selective Service has had a serious morale effect in industry. When the elections are over, the manpower problem must be tackled from the top.

Still a Chance Left

THE next six months will be a crucial test for the Civil Aeronautics Board, probably more crucial than some of the members realize. The Board must become an active participant in the multitude of air transport problems connected with the war, or it will fade into the background completely. Ex-member G. Grant Mason strived without results to prepare the Board for war duties when there was still time to prepare and plan rationally. Instead, the Board chose to hole up in its quasi-judicial robes. The war parade all but passed the Board by. It is not too late to take aggressive and forthright action, but it will require the active support of Messrs. Branch, Ryan and Warner to the far-sighted and constructive leadership of Chairman Welch Pogue.

Not long ago the Board decided to clear the slate of all cases for which hearings had been held. We are not sure this was a wise move, although we commend the Board's decision to clear the slate. But the Board has been so far behind in its decisions, especially rate cases, that the decisions mean absolutely nothing in the light of today's situations. Even on new route applications, the basis for deciding such applications is null and void today. We suggest the Board clear its slate, but not issue decisions which mean nothing at this late date. We suggest it revamp its program, consider the military operations in its rate considerations, and start out afresh. Military operations today subordinate the purely commercial. Unless the Board wakes up, it won't even have the commercial left for its consideration.

Side Show

MR. OSWALD RYAN of the Civil Aeronautics Board is still pleading for Federal control of the air. There was a time when it was highly interesting to indulge in legalistics over Federal vs. State control, but we would like to suggest that the same amount of time could much better be spent today in attending to major problems facing the CAB. Control of the air is certainly not a war-time problem.

No new action is needed on Federal control of the air for the very simple reason that the President already has ample power under the Defense Act. If action is needed for the post-war, then war-time is no time to inspire such action.

The Civil Aeronautics Administration is so burdened that it can't do its entire job right now, let alone adding new burdens that aren't necessary.

It would seem that this is nothing more nor less than another attempt to grab Federal control of aviation under the guise of war-time national defense. The states certainly have something to say about Federalized control, but no one has time to argue about it these days. Furthermore, in the opinion of at least one authority, no constitutional amendment is needed to exert Federal control, for the Supreme Court can be relied upon to apply the constitutional grant of control over interstate commerce to whatever solution could conceivably arise in the future use of airspace. Let's stick to today's problems; goodness knows there are enough of them. How about it, Mr. Ryan?

Letters

Burbank, Cal.

College schoolboys studying Economics I know full well the economies of large scale business enterprise. Therefore, it is a little difficult for me, as an old-timer, to look upon Dr. F. A. Spencer's unofficial report to the CAB as either unduly profound or unduly important.

Small and poorly situated airlines need to expand by means of new, long, heavy-traffic routes, not by mergers of one weak company with another. Costs are only half of the expansion picture; traffic is the other half. Surely the CAB is not one-eyed.

The broadening of service to the public by means of feeder routes is peculiarly the province of the small airlines. American Airlines does not serve the important Michigan manufacturing towns of Ann Arbor, Jackson, and Kalamazoo at all; yet these points are named in its certificate for route No. 7. The reason, of course, is that American is preoccupied—and rightly so—with the intensive and economical operation of large airplanes between large cities. Surely the population of any medium-sized town would welcome the entrance of a small airline. This area of development is too vast for any premature restriction.

New routes should come first for the small airlines. Mergers can come later, much later.

John M. Hendrick

Ann Arbor, Mich.

I am writing to you at this time to add a few more ideas to the confusion already surrounding the fighter controversy.

As I see the problem, the task of the engineer is actually predetermined by the grand strategy of the war as formulated by the high command. In short, there are two kinds of war, the war of attack and the war of defense. The pursuit ship is a natural development of these basically opposite ideas. Speed is the essence of attack, maneuverability that of defense. This war so far has shown that the attacker usually wins. The pursuit ship should therefore be designed, bearing this in mind!

Consequently, a fighter should be designed mainly for high speed and maximum rate of climb. These should be the outstanding characteristics of every fighter plane. However, most of our present designs represent a compromise, the rate of climb and speed being to some degree sacrificed with the objective of increasing maneuverability, giving the pilot the possibility of making sharp turns, and achieving a low landing speed.

Generally these differences will be directly proportional to the size of the wing, a ship with a higher wing loading due to smaller wing area being usually faster but less maneuverable, assuming otherwise similar conditions, such as gross weight and power available. At very high altitudes the induced resistance becomes increasingly important and a ship

with a smaller wing will be outperformed by one with a larger wing. This critical altitude can assume any value around 18,000 feet for our current designs (the new turbo-supercharged models excluded), ships with small wings and high wing loading having a greater speed and better rate of climb below this critical altitude. This superiority in performance will normally enable such a machine to choose the timing for an attack whereby the initial advantages of surprise would count in favor of a smaller pursuit ship.

In case of a dogfight the advantages would clearly be on the side of a machine with a bigger wing and smaller wing loading. In this war, this type of fighting is not being used very frequently, and there is nothing that will force a pilot to accept a dogfight for any length of time if the higher speed which is at his disposal enables him to discontinue it at any time, especially if he can renew the fight later should he so desire.

The main job of a fighter is to work in close cooperation with the bombers. By engaging in a dogfight the fighters usually lose contact with their bombers. The fighter with the higher speed will achieve his primary objective even if he does not succeed in shooting down his enemy, by keeping him away from the escorted bomber. Having a greater speed, he will be the first to catch up with the bomber formation he has to escort.

To summarize, then: speed is the essence of attack, maneuverability that of defense. The attackers so far have won in this war. Let's design our pursuits accordingly!

Alexander Satin.



JANE'S ALL THE WORLD'S AIRCRAFT, 1941, compiled and edited by Leonard Bridgman; The Macmillan Co., 60 5th Ave., New York, N. Y.; \$19.00.

This authoritative annual aviation reference book for 1941 has been published and is now available.

QUEEN OF THE FLAT-TOPS, by Stanley Johnston; E. P. Dutton and Co., Inc., 286 4th Ave., New York, N. Y.; 280 pp.; \$3.00.

This first-hand reportorial account of the U.S.S. Lexington and the Battle of the Coral Sea is fast moving and authoritative. Paul Bellamy of the Cleveland Plain Dealer calls it "absolutely the best war epic ever written by a newspaper man."

Stanley Johnston, Chicago Tribune reporter, barely escaped with his life when the Lexington went down in a blaze of glory, but he managed to save his on-the-spot notes and brings us one of the most vivid accounts of modern naval warfare ever published. The score: 23 Japanese warships sunk; the enemy invasion fleet dispersed; Australia saved. Our losses: 1 carrier, 1 tanker, 1 destroyer, the lives of some gallant American boys.

The Battle of the Coral Sea. It is to be remembered, wrought a whole new naval philosophy: the aircraft carrier



Courtesy of The Yank

"A Mrs. Finnegan of Peoria requested that we drop the whole damn thing on them."

evolved as the spearhead of the modern Navy.

AIRCRAFT ENGINE TROUBLE SHOOTING CHART, by Andrew Wallace, M. M., Crew Chief, Eastern Air Lines; The Norman W. Henley Publishing Co., 19 W. 45th St., New York, N. Y.; 75c.

This reference chart, based on years of practical experience, is arranged so that anyone can easily trace and learn the proper way to correct engine troubles. It is endorsed by Capt. Eddie Rickenbacker, EAL president.

PROCEDURE HANDBOOK OF ARC WELDING, DESIGN AND PRACTICE, seventh edition; edited by the Lincoln Electric Co., Cleveland, Ohio; 1266 pp.; \$1.50.

"This new Procedure Handbook is designed to provide as much complete, up-to-date arc welding information as possible to assure speedy victory . . . and to aid industry in planning for post-war business," the preface states.

New information given in the seventh edition is on the following subjects: welding symbols, new allowable stresses; pre-heating for welding; stress relieving; flame cutting; AC vs. DC for welding; plug welds; estimating costs; procedures; speeds and costs; automatic welding; "feet-filled" technique; easy-to-build testing machines; general metallurgical characteristics of metals and alloys; weldability of aluminum alloys; SAE steel numbering system; tubular construction; appearance and styling in welded design; design of a press; list of cities with welding in building permit; rigid frames with fixed ends; rail end welding; and information on 39 other arc welding applications in manufacturing, construction and maintenance.

Photographs and diagrams accompany the text.

Obituary

Lieut. L. V. Lawver

Lieut. Lawrence V. Lawver, 29, tower officer, Wright Field, Dayton, O., died Sept. 8 of injuries resulting from a plane accident at Newark, O.

Trained at Randolph Field, Lieut. Lawver joined TWA in 1935 as dispatcher. Later he was executive secretary of the Aircraft Owners and Pilots Association. When the South Dayton Airport opened this year he was airport manager. On May 11 he joined the AAF.

Comdr. K. J. M. Grieve

Commander Kenneth J. Mackenzie Grieve, 62, died Sept. 26 in Victoria, B. C., according to the Canadian Press. Reports recalled that Commander Grieve was awarded the Air Force Cross for acting as navigator in the trans-Atlantic flight attempt of Harry Hawker in 1919.

Joe F. Cannon, Jr.

Joe F. Cannon, Jr., president of the Cannon Aircraft Corp., Charlotte, N. C., and a member of the Air Transport Command, was killed in a plane crash Oct. 2, near Charlotte. Cannon was piloting the wrecked plane, a transport. Two passengers were also killed.

Non-Essential Aircraft Grounded in Canada

Beginning Sept. 30, all non-essential aircraft in Canada were grounded in order to conserve aviation gasoline, according to the Dept. of Munitions and Supply, Ottawa.

Provision is made in the new regulation that without a permit in writing from the Oil Controller, "no person may use any petroleum product for the operation of any type of aircraft."

Exempted are the following:

1. Aircraft of the armed forces of Canada and her Allies.

2. Aircraft operated under the Combined Air Training Organizations, whether owned privately or by the Government. (The Combined Air Training Organizations comprise all RAF and RCAF air training units in Canada).

3. Any scheduled air transport service licensed by the Board of Transport Commissioners or the Department of Transport.

"It is our intention to refuse permits to those who are flying for pleasure or for non-essential purposes," said Oil Controller Cottrelle. He added that he will consider permit applications for such essential services as:

1. Necessary Government services, both Dominion and Provincial. (These will include the forestry patrols of the various provinces).

2. Non-scheduled air transport services to outlying districts otherwise inaccessible.

3. Essential mining and exploration.

4. Aerial photography for surveys approved by the Department of Transport after consultation with the Department of National Defense.

5. Testing of aircraft or aircraft engines by manufacturers.

6. Pilot training for essential civil and commercial services.

Household Paraffin Solves Problems of Airport Turntables

J. Earl Steinhauer, assistant manager of operations of Washington National Airport, believes he has found a solution to airport turntables. It's nothing more than plain household paraffin.

A regular turntable, which accommodates one of the front wheels of an airplane for turning into position, are not only costly but are made of critical materials. Few airports are equipped with them. At Washington National Airport they are available only for the scheduled airliners.

But like many other airports, Washington is the stopping place for a great many Army and commercial planes of all types and varieties. Turning on the taxi strips is hard on tire rubber. Steinhauer experimented with grease, but found this only partially satisfactory. Grease was slippery but it didn't hold up very well and dirt detracted from its efficiency.

Then Steinhauer hit on simple paraffin, melted onto the pavement by a blow torch. The surface was hard but slippery. It worked. Now it's in full use at the airport and becoming popular. It is saving much wear on tires and makes turning simple. Steinhauer recommends its use for all surfaced airports. It does the work of costly metal turntables for the cost of a dime and a few minute's work.

Rule on Crop Dusters

Airplane pilots engaged in crop dusting are listed among "critical" agricultural occupations by Selective Service System.



Ready for Snow: Pictured above is the solution Washington National Airport found to saving its flush runway lights from being broken by snowplows. Nothing less ingenious than a piece of rubber hose sticks up above the light—and above the snow, thus keeping the plows away. Last winter the airport lost many lights when plows ran over them. Pictured with the device are its inventors, Richard Romayne, chief of the CAA electrical section, on left, and J. Earl Steinhauer, assistant manager of operations at the airport.

CWTI Establishes Parachute School

Establishment of the first civilian school for training of men in repair, maintenance and packing of parachutes, at the Curtiss-Wright Technical Institute, Glendale, Cal., has been announced by Maj. C. C. Moseley, its president. CWTI operates as one of the AAF's civilian contract schools, with students from the AAF Technical Training Detachment at Glendale.

Rex G. Finney is the unit's instructor. Students learn the patching and repair of parachutes, harness and tacking. They also learn how to pack the 'chutes and all other details connected with their servicing. The men do no jumping in this training course.

Wins Scholarship

Miss Dorothy Broadfield is the winner of the current Amelia Earhart Memorial Scholarship award, according to announcement of the Ninety-Nines, international organization of women pilots. Miss Broadfield is a member of the Missouri Valley chapter of that organization. She has been active in organizing the Civil Air Patrol in Omaha, and is the Group Adjutant of that unit. In addition, she is the Women's Flight Leader.

Civil Briefs

Michigan CAP Airport: Michigan Wing will soon open its own airport at Wings Field. Construction was made possible by volunteer labor from CAP squadrons in Michigan. From this airport, practice coastal patrol missions will be flown over the Great Lakes. Michigan members can prepare themselves for active duty in patrols, spending two weeks, or coming to training on week-ends, at this new location.

CAP Air Support: During the summer, in many areas, CAP units have simulated air support for the training of ground units of the National Guard and the U. S. Army. In most localities, CAP is the only aerial protection, since air units of the National Guard were transferred from state to national service more than a year ago. And almost every state that had organized an air unit before CAP has either merged with the Patrol, or discontinued in favor of the State Wing of CAP.

CAP Membership Gains: During August, CAP National Headquarters received 2,730 membership applications. Total to Aug. 31 is \$8,554. There is believed to be a net gain of several hundred each month, even allowing for those who have gone into the armed services or other branches of aviation.

To Service Army Planes: Squadron 315-10, Pittsburgh, Pa., is training to qualify as volunteer helpers in servicing Army planes which land in that area. It is hoped this will help to prevent delays when Army personnel is not sufficient during an unusually large flight. Squadron Commander Wilbur Castor suggested to Army authorities that CAP members be permitted to act as helpers, so as to learn the routine and be ready to help in emergencies.

Officers Appointed: At National Headquarters of CAP, formal appointment of more than 1,000 CAP captains and lieutenants have been made in recent weeks. Each appointee must have completed 81 hours of basic training to meet minimum requirements. Forms for the appointment of Flight Officers and non-coms, signed by the National Commander, are available for those who have completed basic training.

Night Flying Exercises: In recent night flying exercises, Squadron 511-2, Willoughby, O., took over Perry Intermediate Airport at nightfall. By 3:00 a.m., 16 planes and 48 members performed 175 landings. Squadron Commander C. W. Grove and Operations Officer Frank Sanzo made 30 landings each with only a flare path to guide them in. Guard mount worked in two hour shifts.

Michigan CAP Survey: To map possible dispersal points for planes in case of enemy raids, squadron at Flint, Mich., has made a flight survey of three counties. This unit also reports it has been helping the Sheriff's department in searching for the body of a man drowned in Lake Fenton. It also reports it has reached high proficiency in bombing practice.

Houston Airport Improvements: In the past 18 months, a total of \$1,007,229 has been spent on municipal airport improvements, according to Paul B. Koone, acting manager of Houston's airport. These improvements included: 368 acres of land purchased at \$147,300, which increased the area of the field to 1,023 acres; paving of three 4,500 foot runways and one 4,670 foot runway, each 150 feet wide; paving of the East-West taxi strip and the North-South taxi strip; installation of appropriate underground drainage, fencing, and a new and modern lighting system for the field, all at a cost of \$845,029, and construction of one new hangar for use in connection with the war effort at a cost of \$15,500.



Air-Minded: I. W. Baldwin, manager of S. F. Bowser & Co.'s aviation division, stands beside the company's model LFA Culver. Bowser found it necessary to purchase the plane "in order to more quickly conduct its widespread business with the aviation industry," company states. Baldwin is executive officer of Civil Air Patrol's Indiana Wing Group 523 "and both his time as well as the plane have been offered by the company for use in connection with any CAP duties." Bowser handles fueling equipment installed at airports, equipment for handling oils and paints, filtration systems, and grinding and honing oils.

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Army Airacobra on a Fighting Front

HE'S BETTING PLENTY "on the Nose"



Sent "upstairs" to destroy an enemy attack, this flyer is placing his bets "on the nose" of his Army Airacobra.

For firing through the nose of his sleek and speedy fighter is a mighty cannon. A single shot, struck home, will blast the biggest bomber from the sky.

When plans were laid to build this "flying cannon" no gun so large had yet been mounted in a single-engine plane. And Bell Aircraft, too, did its betting "on the nose." We set a cannon out in front then built

a fighter plane around it. It was a new and untried theory that called for pioneering skill and engineering genius.

Theorists said it wouldn't work—scoffed at the thought—while a staff of able aircraft engineers, assisted by our Army Air Force, set out to do the job.

Our answer is the Airacobra—the only single-engine

fighter of its kind. With engine "aft" the pilot sits behind his cannon, as though he rode the breech, so deadly accurate is his aim. With all at stake he's betting plenty "on the nose." © Bell Aircraft Corporation, Buffalo, New York.

Airacobras for victory—
FUTURE PLANES FOR PEACE
BELL *Aircraft*

PACEMAKER OF AVIATION PROGRESS



CURTISS WARHAWKS

STRIKE WITH GUN AND BOMB!

To destroy the enemy in the skies and to demolish his armored forces and services of supply on the ground is the dual mission which is bringing new fame to bomb-equipped Curtiss P-40 Warhawks. These pursuit planes give the United Nations a new and deadlier type of weapon.



For outstanding accomplishment, Curtiss-Wright Buffalo workers are now proud possessors of the new joint Army-Navy Production Award.

CURTISS-WRIGHT
Corporation
AIRPLANE DIVISION

Send 10¢ for your copy of "Men and Wings"—a fascinating 96-page history of aviation by Assen Jordanoff. Airplane Division, Curtiss-Wright Corp., Buffalo, N. Y.



1903 • The first Curtiss plane designed specifically as a fighter-bomber... a single seater, it was used by the U. S. Navy for operation from aircraft carrier.



1937 • First fighter-bomber to use retractable landing gear—used by the Navy and by China, Argentina and Siam. Wing bombs were also carried.



1938 • The Hawk 75... a monoplane fighter-bomber, incorporating heavier defense armament, increased maneuverability and carried a greater bomb load.



1940 • Curtiss P-40 Tomahawk... equipped the R. A. F. in the middle East and the American Volunteer Group in China, Java and Burma.

Los Angeles-San Francisco Route for WAL Favored by CAB Examiner

Would Compete With United; TWA Refused

A DIRECT route between Los Angeles and San Francisco, to be operated by Western Air Lines in competition with United Air Lines, has been recommended by CAB Examiner Alfred Forster.

At the same time, Forster urged that TWA's application for permission to operate in this territory be refused.

Other recommendations contained in Forster's report were: (1) United be granted stops at Visalia, Merced, Modesto and Stockton on route 11, (2) Western be permitted to serve San Bernardino on route 13, (3) TWA be allowed to transport mail into Oakland on route 37, and (4) decision be deferred on Western's application for a Los Angeles-El Centro route.

In recommending more service between Los Angeles and San Francisco, the examiner admitted that "there is no substantial evidence to support a finding that the existing services operated by United are, or have been, inadequate."

Cites Export Case

However, he called attention to CAB's decision granting American Export Airlines a trans-Atlantic service, explaining that "the Board found that the saturation point of available air traffic on the trans-Atlantic route had not been reached, and a similar finding herein as to the abundance of available air traffic between Los Angeles and San Francisco is supported by substantial evidence of record."

CAB in the Export case, he continued, "properly recognized . . . that the general rule respecting the duplication of adequate existing services is subject to the qualification 'that an additional service may be required in the public interest even though an existing operator is supplying in quantum what appears to be a sufficient service, where there is lacking any worthy competitor of such operator in its own field, and where the available business is ample to support another operation.'

"The record herein supports the conclusion that although United is supplying in quantum what appears to be a sufficient service between Los Angeles and San Francisco, the available business appears to be ample to support, within the meaning of the Act, another operation."

Traffic growth between the two California cities, Forster stated, will be affected by two things: (1) that

Culbert to Join AA; Bern to Resign

Amos Culbert has resigned as vice president, treasurer and general counsel of Chicago & Southern Air Lines and will join American Airlines Dec. 1 as vice president-property, a new office created by recent action of the board of directors.

American is also expected to announce shortly the resignation of Edward G. Bern as regional vice president. Bern will join the Howard Hughes-Henry Kaiser aircraft enterprise.

growth normally attributable to industry growth, and (2) that growth stimulated by competition.

"By giving full weight to the estimates of TWA and Western, there can be no doubt that the diversion of passenger revenue from United would be substantial," he added. "It would be pure conjecture to estimate the amount thereof in dollars."

"If the application of TWA were granted, it is likely that the measure of diversion would be greater than if Western were granted authorization, since, in addition to local Los Angeles-San Francisco passengers, all of the through and most of the stop-over passengers now transferred from TWA to United would undoubtedly be transported by TWA. Moreover, TWA would carry some of the New York-San Francisco and Chicago-San Francisco direct passengers presently carried by United alone.

"If a certificate is awarded to Western, the system need of that carrier would undoubtedly be reduced. As heretofore pointed out, the mail compensation per revenue mile received by Western in 1940 was the second highest of the domestic mail carriers. In this respect the mail rate per revenue mile paid United in that year for route 11 was one of the lowest rates on any route in the country.

"It appears, therefore, that if additional mail compensation would be required by United on Route 11 by reason of competition with Western between Los Angeles and San Francisco, such increase would be offset, to some extent, by the reduction in mail compensation presently being paid Western.

"It is believed that the burden which might fall on the government by reason of the additional costs it would incur through the payment of mail compensation to Western and United would not be disproportionate with the advantages that would accrue to the public through a competitive service between Los Angeles and San Francisco."

Forster discussed at length TWA's application to include Los Angeles as a stop on route 37 (Boulder City-San Francisco). AM37, even though it provides service to San Francisco, is "basically impractical" and cannot be made adequate for the needs of the traveling public unless Los Angeles is a stop, he quoted the company as stating.

"TWA," he added, "has never been able to overcome the one factor that has contributed in a large measure to the poor operating results shown on route 37, namely, that the relatively few direct connecting San Francisco passengers which it carried were able to make better time between Eastern and Middle Western

Eire Opens 1st Domestic Airline

The first domestic airline in Eire was opened recently when Aer Lingus Teoranta (Irish Airways Ltd.) opened service between Dublin and Limerick, according to the British press.

The new line, it is said, will improve transportation within the country, and its terminal in Limerick will make it a link in trans-Atlantic air service.

points and the Pacific coast, to have a greater selection of departure times, and to be subjected to fewer inconveniences by using the connecting services at Los Angeles than by the use of the connecting schedule on its own service at Boulder City. From the point of view of such of TWA's passengers, the sole advantage in the proposals herein over the more desirable existing services at Los Angeles would be a through one-company service. This advantage, benefiting a small minority, cannot be considered substantial."

Questions AM37

Forster then directed the Board's attention "to the position taken by the management of TWA as to the future of route 37 and the substantial losses shown in the past operation thereof.

"In view of such showing, the record raises considerable doubt as to whether the substantial governmental expense involved in the continued operation of this route is in the public interest, especially when the record shows that the public interest can be better served by other existing services, regardless of the recommendations herein."

Limited Territory

Western, the examiner asserted, is the only carrier with its headquarters located west of the Rockies. "A carrier the scope of whose activities are confined to the Western region of the U. S., and whose primary interest would be to serve a limited territory, would appear to be better able to develop local traffic than one whose varied interests are devoted to serving extended areas.

"Closer supervision to local operations, safety problems, traffic solicitation and advertising would reflect an advantage to the local traffic. These are matters which would benefit traffic between Los Angeles and San Francisco . . . In granting Western the authority to operate between Los Angeles and San Francisco that company will thereby be afforded the best opportunity, and one of the few remaining, to expand . . ."

CPAL Changes

Canadian Pacific Air Lines now has headquarters at Room 620, Dominion Square Bldg., Montreal. However, some officials, including President L. B. Unwin, are still located at Windsor Station, Montreal.



All-Cargo Service: Pan American-Grace Airways has two Douglas aircraft which are used exclusively for the carrying of cargo. The freight shown here consists largely of spare parts, being shipped to Lima, Peru, from the U. S.

Warner Opposes Decision Putting Puerto Rican Line Out of Business

Urges Division of Two Routes Between Carriers

BY SELECTING Caribbean Atlantic Airlines over Aerovias Nacionales de Puerto Rico to fly certain Puerto Rican routes, and giving the latter company 180 days to terminate operations, the Civil Aeronautics Board "sweeps away the work of one of these carriers," CAB Member Edward P. Warner stated Sept. 30 in a dissenting opinion.

In the 2-1 decision, Chairman L. Welch Pogue and Member Harlee Branch (Members Baker and Ryan not participating) had refused the Aerovias application and granted Caribbean-Atlantic San Juan-Ponce-

Mayaguez and San Juan-Charlotte Amalie-Christiansted routes.

Although the case was of little interest to the industry as far as the actual routes were concerned, officials nevertheless were impressed with the philosophy of the decision.

"The present operations of each of these carriers represent a substantial monetary investment, and the investment of several years of the lives of men who have chosen to devote themselves to the development of air transportation in Puerto Rico and the surrounding area," Warner's dissenting opinion said. "I cannot concur in a decision which sweeps away the work of one of these carriers, through a denial of the right to continue operations upon any portion of the routes heretofore served."

Pogue and Branch, in making their decision, stressed the fact that Caribbean-Atlantic's service has been comparable in reliability to the domestic carriers, while Aerovias has had "frequent suspensions."

Warner said: "It is not an easy case to decide. The traffic is likely to remain comparatively light; continued duplication of service, by two paralleling competitors, would be uneconomical and unwise; but the total exclusion of one of the carriers from all future anticipation in the field . . . appears to impose a hardship upon a long-established enterprise as also to be, in my opinion, highly undesirable."

"There remains the alternative, which I support, of the division of routes. Although the scale of each of the portions of a divided operation would be small, the operation between San Juan and Ponce and that between San Juan and the Virgin Islands appears readily separable."

Handicap Economy

"Aerovias . . . has . . . been the more successful in attracting traffic on the route within Puerto Rico, whereas Caribbean - Atlantic has been the more successful on the over-water service. Although operations so limited in scope would impose a substantial handicap upon economy, that fact must be balanced against all the other circumstances that enter into the historic background of the case, and that argue against destroying either of the carriers that have appeared before us."

"I believe that a certificate should be issued to Aerovias . . . to operate between San Juan and Mayaguez via Ponce; and that a certificate should be issued to Caribbean-Atlantic to operate between San Juan and St. Croix via St. Thomas."

Admitting that a decision in the case "is a difficult one," Pogue and Branch pointed out the following to support their findings: Against Caribbean-Atlantic's record of successful operation, Aerovias' service, since its inauguration in June, 1938, has been irregular and undependable, and there have been frequent suspensions of service, many of which were necessary to permit the repair and maintenance of . . . aircraft and engines.

Year's Suspension

"As heretofore stated, on Jan. 13, 1940, operations were suspended for a period of about a year. This suspension was due to the refusal of the air carrier inspector to renew the airworthiness certificate of Aerovias' Beechcraft. This plane was subsequently sold and operations were not resumed until Feb. 21, 1941, after the acquisition of the Grumman."

"Clearly an operation so disrupted by suspensions of service is not one

Don't Rush

The British magazine *Flight* reports as follows: "A piece of practical post-war planning is in the announcement of Jersey and Guernsey Airways to the effect that in response to many applications they have opened a waiting list for those desirous of returning to the Channel Islands by air as soon as the islands are freed of enemy occupation." *Flight* calls this a "no announcement" "intelligent anticipation."

Trans-Canada Air Lines in July had a decline in passengers carried, from 10,317 in June to 9,440 in July. But TCA's planes carried 192,971 lbs. of mail in the same month, an increase of 18,867 lbs. over June, and 63,728 lbs. more than in July of 1941. In July, 1942, TCA flew 33,323 lbs. of express, an increase of 4,342 lbs. over June. However, in August, 1942, the firm carried 9,584 passengers, up 144 from July, and 300 more than in August, 1941. In August, 1942, its planes flew 208,617 lbs. of mail, which was 15,600 lbs. more than in July, and 179,100 over the August, 1941 figure. In August, 1942, TCA carried 38,835 lbs. of express, 5,512 lbs. more than in July, and 16,966 lbs. more than in August, 1941.

contemplated to promote the proper development of a sound air transportation system, and while we recognize that such suspensions might not occur in the future the past history of the two applicants affords a basis for measuring their comparative fitness and ability to perform the desired service."

"Furthermore, Caribbean has demonstrated the ability to continue a relatively successful operation in which operating losses have been reduced to a minimum, whereas Aerovias' operation has been characterized by continuous operating losses resulting in a deficit charged to surplus as of the end of 1941 of \$85,174 as contrasted with Caribbean's deficit of only \$4,528."

A. E. Floan Elected Secretary of NWA

A. E. Floan, director of the Bureau of Economic Research of Northwest Airlines, has been elected secretary of the company, filling a vacancy created when E. I. Whyatt resigned as secretary to become vice president and treasurer.



Floan

Floan joined NWA in 1940 as Seattle traffic manager and last year was named director of economic research. A native of St. Paul, Minn., he studied at Princeton, Harvard Law School, and the University of Minnesota, and practiced law for several years.

Pan American Air Ferries to be Taken Over by ATC

Effective Nov. 1, the Air Transport Command will take over the activities of Pan American Air Ferries, according to a War Dept. announcement of Oct. 3.

On Oct. 31, it was explained, the contract between the War Dept. and PAAF expire. "Thereafter the ferrying of lend-lease and other aircraft to American Forces and the forces of the Allied nations in the Middle-East will be handled directly by the Air Transport Command," it said.

PAAF's operations have been "well conducted and contributed substantially to the success of the war program," the War Dept. asserted, adding, however, that "it has long been the intention of the War

Dept. to have aircraft ferried into combat zones flown by military crews."

"Many of the men engaged in civilian capacity under the former contract have indicated their desire to continue with the undertaking. An opportunity to do so will be afforded by the Army Air Forces through the offer of commissions in appropriate grades to selected senior pilots, co-pilots, navigators and certain other technical personnel of the Pan American Air Ferries system."

"An office has been set up at the Thirty-Sixth Street Airport, Miami, Fla., to facilitate this commissioning. Personnel accepting commissions will be called to active duty Nov. 1."

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PARTS

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Thermostats and Pressure Relief Valves and Tanks for Liquid Cooled Engines

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STANDARD AIRCRAFT PRODUCTS, INC.
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FIGHTING WORDS

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"TARGET SIGHTED. BOMBARDIERS
PREPARE FOR ACTION"

"CRUSH GUNS
ON YOUR LEFT"

"BATTERY LAID
AND READY"



... delivered on every front by Western Electric equipment



"Get the message through!"
is the tradition of men
in the Signal Corps. More
than 5,500 of them are
from the Bell System.

OUT of peace-time telephone making
come war-time telephones like these.
On every front, they keep the armed forces
in contact.

In the air, on land and water and under
the sea, they give commanders control of

operations . . . multiply the effectiveness
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Like the men who use them, they are
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Western Electric, for 60 years manufac-
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ARSENAL OF COMMUNICATIONS



TRANSPORT

55 Essential Airline Jobs Listed by Selective Service

A TOTAL of 55 jobs in air transportation have been listed by Selective Service headquarters as "essential."

SSS officials emphasize, however, that the list is intended to provide temporary security of hard-to-replace personnel, together with an orderly process for withdrawal of less important employees.

It is not intended to provide "blanket deferments" for an extended period and employers are warned not to assume that employees in any listed classification are safe indefinitely.

The complete list follows:

Accountant
Aircraft—Maintenance Specialist
Aircraft Mechanic
Airline Pilot
Airport—Tower Control Operator
Airway—Traffic-Control Operator
Airway—Traffic Coordinator
Cargo, Control Officer, International
Carpenter, Maintenance
Cashier, Supervising
Chief Clerk
Chief Pilot
Communications Operator
Documentation Officer, International
Draftsman
Electrician
Engine Mechanic

Engineer, Professional and Technical
Flight Dispatcher
Flight Engineer
Foreman, Maintenance
Inspector, Aircraft and Engines
Inspector, Materials and Supplies
Instructor, Link Trainer
Instructor, Pilot
Instrument Repairman
Machinist (All Around)
Manager, Airport
Manager, Division
Manager, Employment and Personnel
Manager, General
Manager, Operations
Manager, Station
Manager, Traffic
Meteorologist
Navigator
Propeller Mechanic
Purchasing Agent
Radio Officer, Flight Crew
Radio Operator
Radio Repairman
Reservations Supervisor
Schedules Supervisor
Station Agent (with ramp duties)
Stationary Engineer
Steward, International Airline
Storekeeper
Superintendent, Communications
Superintendent, Maintenance
Superintendent, Passenger Service
Superintendent, Stations
Ticket Office Supervisor
Traffic—Rate Clerk
Training Instructor
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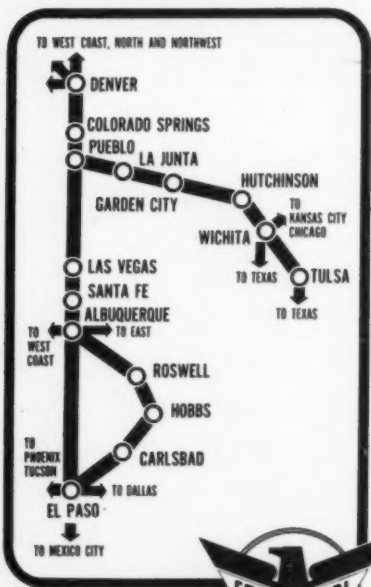
Speed War Effort—Use CONTINENTAL'S

GATEWAY TO MEXICO



Now you can fly to Mexico City (via El Paso) on fast sky schedules . . . Continental, through its connections with American Airlines, offers this new daily service . . . to help speed war production . . . to bring closer our fighting Ally south of the border.

Cooperate by Flying
during Mid-Week



CONTINENTAL AIR LINES

AIRLINE COMMENTARY

There was a lot of scrambling around at the Civil Aeronautics Board on Sept. 25 . . . That was the last day upon which the Board said it would receive applications for Caribbean air service . . . No one had even made a move to file before that date, probably not wanting to tip his hand . . . Instead of making everyone wait around until closing time, CAB officials accepted the applications "simultaneously" and released them "simultaneously" the next day . . .

Three of the applicant companies in the case were represented by the same man, J. H. R. Grant, of New York . . . Their applications caused comment, to say the least . . . Transportes Aereos Colombianos, Aeroplanos de Carga Latino-Americanos and Transportes Aereos Venezolanos, the three companies, all stated that they contemplated "having aircraft of not inferior to the Douglas B-19 type, carrying approximately 28 tons payload" . . . CAB wasn't impressed . . . It dismissed the applications for lack of equipment . . .

Will the determination of priorities on airline traffic remain a function of the Air Transport Command? . . . Some officials are said to favor raising Col. Ray Ireland's section from a "command" level to a "staff" level . . . There are no guesses on the outcome . . .

Investigation of transportation industries by the antitrust division of the Department of Justice is not expected to reach airlines immediately, although anti-trust attorneys lately have been asking questions in the hope of turning up something which could be used against the airlines . . . Rate and tariff structure of the railroads are first on the division's list of transportation topics to be investigated . . .

After all the smoke about airline mergers, consolidations, purchases, etc., action seems to be likely soon on one or more fronts . . . But what is burning up several small operators is the general assumption that because they are small, they must merge with other small lines or be absorbed by major lines . . . What the small lines want is to become big themselves and they can't see why this isn't possible . . . If it is more economical to have only big airlines, they reason, why not make the small ones big instead of merging into a few systems? . . . That's a tough one . . .

Slowness with which the CAB is moving on decisions of all kinds is griping the industry more and more . . . The books are full of cases awaiting action . . . A good example of CAB's lethargy is Pennsylvania-Central's rate case . . . The company opened its Norfolk-Knoxville route, operated it for several months and then closed it when planes were needed more urgently elsewhere . . . And as yet, PCA has received no mail pay for the route . . .

Noteworthy is the new trend of airline advertising, such as United's institutional type of morale-building ads in AMERICAN AVIATION . . . And Pan American's expensive series of high-caliber and thought-provoking ads, with due credit to indefatigable Sam Pryor . . . American Airlines is still keeping up its fast pace of smart, informative ad copy, while TWA has gone into unusually appealing and eye-catching layouts with color . . .

Recent smart move on Pan American's part was W. I. Van Dusen's house party for Army and Navy public relations officers (including every single brass hat that counts in Washington), to which was invited airline publicity men . . . What knocked everyone for a loop was PAA's inviting an American Export Airlines publicity man, which is an indication that better and more cooperative industry days may be ahead . . . It was a worthwhile affair . . . But no newspaper or magazine people were invited—and maybe just as well . . .

E. B.

Statistics

Western Air Lines, Inc., carried more passengers, flew more passenger miles and carried more express in the first half of 1942 than in the same period of 1941, although operating fewer planes than last year. Detailed figures, with those for 1941 in parentheses, follow: passengers 38,731 (28,389), up 36.4%; passenger miles 11,750,622 (9,126,157), up 28.8%; express 66,789 lbs. (31,446), up 112.4%.

United Air Lines, flew 28,788,000 passenger miles in August, compared with 24,876,652 in July, an increase of 16%. This contrasts with 32,859,813 in Aug-

ust, 1941. In August, 1942, UAL flew 1,775,730 airplane miles, against 2,587,498 in August, 1941. In August, 1942, United flew approximately 745,956,000 express pound miles compared with only 289,296,944 in August, 1941. In the first eight months of 1942, United's planes flew 4,710,549,537 express pound miles, contrasted with 1,845,404,901 in the same period of 1941, an increase of 155%.

Air Express Division, Railway Express Agency, reports air express flown by all commercial airlines in July was 2,012,582 lbs., an increase of 87.4% over July, 1941.

C. & S. Reports Its Best Year; Expands Army Transport Division

Visits U. S.



Col. Brito

Col. Meliton Brito, chief representative of Bolivia's national airline, which is operated by Pan American-Grace Airways, has arrived in the U. S. for a study of aviation developments. He will

observe commercial aviation trends in the U. S., with a view of augmenting air services to interior points in Bolivia.

Pilot, Mechanic Labor Groups Confer With ODT

A committee representing organized air transport employees conferred recently with Otto S. Beyer, director of Office of Defense Transportation's division of transport personnel, on the problem of future airline personnel requirements.

Attending the meeting were Charles V. German, representing David L. Behncke, president of the Air Line Pilots Association, and J. L. McFarland and T. B. McCue, of Airline Mechanics Association.

"Questions discussed," said ODT, "included the effect of selective service on ground crews, the need for a large-scale training program for new employees, the recruitment of new personnel, and methods for obtaining the most efficient utilization of available manpower."

"The conference approved the increased employment of women in the office and ground forces of the airlines, where practicable, and favored the creation of a labor-management committee to facilitate the conservation of materials and equipment used in air transport, further safety, improved service and increased output."

Congressmen Back Kaiser's Proposals

Sen. Lee (D., Okla.), who headed widely publicized air cargo hearings, said recently that he hoped "governmental brass hats" soon would "wake up" and award Henry J. Kaiser contracts to construct a giant fleet of cargo planes.

Lee pointed out that Kaiser's record recently in launching a 10,500-ton Liberty ship in just 10 days was "one of action, action, action and more action" which should convince "any fair-minded persons" that he is equal to the plane building job.

A statement by Rep. Angell (R., Ore.) parallels Lee's remarks: "The Kaiser organization in its Portland yards has the facilities to inaugurate such a program (air cargo) and my knowledge of and confidence in Mr. Kaiser and his associates leads me to believe that he will show the same remarkable construction genius in producing these air ships as he has shown in the service ships."

CHICAGO and Southern Air Lines, for the fiscal year ending June 30, earned \$128,959 after taxes, the company reported recently. This compares with a loss of \$111,931 in the preceding year. Surplus which at June 30, 1941, showed a deficit of \$51,307, had one year later been turned into a positive figure of \$96,020 after the distribution of one cumulative and four current dividends of 17½c a share on the preference stock and one dividend of 50c a share on the common stock.

"These developments were due to a growth in all phases of the company's business, and constitute the most successful year in the history of the line," it was announced. Passenger revenues were \$1,321,017 as against \$877,823 in the preceding year, up 50%. Express revenues were \$45,394 against \$30,135, up 51%. Mail revenues were \$629,561 as against \$407,833, up 54%.

Expenses Up 20%

By comparison, operating expenses totaled \$1,798,439, up 20% from \$1,503,892.

In the company's annual report to stockholders, Carleton Putnam, president, says:

"The growth in our passenger and express business must be credited in part to the normal upward trend of air travel, and in part to the heavy demand on all transportation facilities since the outbreak of the war. We have carried our full share of military and civilian passengers and cargo."

"The increase in our mail revenues is attributable to an order of CAB of Nov. 7, 1941, whereby we were awarded \$201,096 in retroactive mail pay for the period beginning Dec. 1, 1939, together with a new rate per mile equivalent to an increase of approximately \$20,000 a month on the basis of mileage flown on Nov. 1, 1941; \$13,000 of this amount represents mail pay on our Houston route. In addition to improving the company's current operating condition, this order made it possible to eliminate the deficit in the surplus account resulting from losses in previous years."

"In connection with all of these matters it should be remembered that during only four months of the preceding fiscal year was the route between Memphis and Houston in operation, whereas this service was carried on throughout the whole of the year just closed. Although so far it has involved but one round trip a day, the route has proved successful as a part of the company's franchises and should be of greater value when more schedules can be operated."

"On June 1, 1942, two of our six DC-3 airplanes were sold to the government. This necessitated the elimination of one round trip between Chicago and New Orleans,

leaving two round trips between these points instead of three. The round trip between Chicago and Houston via Memphis was not disturbed. It is not presently believed that there will be any more drafts upon our commercial equipment, or that present schedules will have to be further curtailed. Business on the remaining schedules has been gratifying. For the month of June, 1942, the first full month of curtailed commercial operations, our net income was \$25,011, an earning greater than any previous month in the company's history with the exception of April and May of 1942, the last months during which we were enjoying the full benefit of unrestricted commercial schedules."

Cargo Carrier

"Of the two planes thus sold, one was converted by us into a cargo carrier and immediately placed in service on a cargo route assigned to us by the Air Transport Command and operated by us under contract with the U. S. government."

"We are now engaged in a considerable expansion of our Military Transport Division. The present extent of our cargo service and the plans of the Air Transport Command for the future are necessarily military secrets, but it is proper to say that we expect this service shortly to outstrip our commercial operation in daily mileage."

"Memphis headquarters has been constituted an Air Corps Modification Base since Dec. 1941. Under various contracts with the government we perform special modification assignments and other tasks. This work enhances our contribution to the war effort and is expected to continue for the duration."

"Contrary to a mistaken impression prevalent in many quarters, the air lines have not been 'taken over' by the Army, nor is it likely that they will be, as long as they continue to perform efficiently the tasks assigned them. The War Department has arranged for the deferment of key airline personnel and the company has met with little difficulty from Selective Service Boards on this score."

Canadian Air Carriers in May, 1942 carried 20,810 revenue passengers, against 21,118 in April, and compared with 15,311 in May, 1941. Mail carried in May, 1942 was 374,176 lbs., contrasted with 333,748 lbs. in April and 274,748 lbs. in May, 1941. On the other hand, freight carried was only 743,936 lbs. in May, 1942, a decrease from the 915,353 lbs. carried in May, 1941. Gasoline consumed by all reporting airlines was 419,706 gallons in May, 1942, an increase from the 385,110 used in April, and above the 376,833 gallons figure for May, 1941. Operating revenues of licensed operators were \$903,197 in May, 1942, against \$854,776 in April, and \$704,705 in May, 1941. But operating expenses were \$819,317 in May, 1942, a decrease from the April figure of \$848,006, but an increase over the \$624,474 necessary in May, 1941.



Explains Shippers Guide: Walter Johnson, assistant manager of air mail, air express and freight for American Airlines, is shown explaining the "Air Express and Air Freight Shippers Guide" to the field superintendents of the department. The guide, AA states, is believed to be the first one of its kind in air transport history and was developed by the company because of the increasing demands upon the air express service resulting from the war and to acquaint traffic managers and shipping departments with the technical requirements of air express service. Left to right around the desk: Stuart Riordon, central superintendent; Jack Smith, western; Clarke Ferguson, assistant to the general traffic manager; Johnson; Jerry Curry, New York; Frank Beach, New England; Art Lewis, cargo research analyst; Crawford Cline, southern, and Tom Bassett, eastern.

Airline Personnel



Joyner

Lee

Stott

Freeburg

In the Services

T. Lee, Jr., director of United Air Lines' Boeing School of Aeronautics, has reported for active duty as a major in the Air Forces Technical Command.

Frederick J. Martin, formerly district manager of Pan American Airways in Seattle, is now a lieutenant (s.g.) in the Naval Air Transport Service.

J. A. Thomas, former central traffic manager for TWA in Chicago, is also a lieutenant (s.g.) in NATS.

Allen F. Bonnallie, former assistant to United's vice president-operations, has been promoted by the Navy from lieutenant commander to commander.

James W. Speer, Jr., Chicago traffic representative for Northwest, has been commissioned second lieutenant in the Air Forces.

Sales and Traffic

Arthur L. Hewitt, formerly manager of Western's agency department, has been named city traffic manager in Los Angeles.

Marie C. Hadley, special representative in St. Louis for American during the past two years, has been appointed traffic manager in that city.

Iris Beals is acting district traffic manager for United at Boston, replacing **Leon Morrier**, who has returned to New York as assistant dtm.

Walter Wehner is acting dtm for United at Oakland, replacing **J. A. Rose**, now serving with the Air Transport Command.

James L. Snell has been placed in charge of United's traffic office at Tacoma, succeeding **R. I. McLaughlin**, now in the Army.

Byron T. Cline, former dtm for Chicago & Southern at St. Louis, has been appointed northern traffic manager.

A. W. French, formerly TWA's assistant mail and express manager, has been appointed mail and express traffic manager, succeeding the late **E. A. Hecker**. **W. H. Plichel** takes French's old position.

Operations

Capt. Mal B. Freeburg, veteran Northwest pilot, has been named check pilot for the NWA system.

Paul P. Smith is TWA's new station manager at LaGuardia Field.

Vincent J. Stott has been appointed TWA's Atlantic division station supervisor. **J. B. Joyner** is eastern division station supervisor.

Branch T. Dykes, formerly with American, has been appointed vice president-maintenance of Colonial Airlines.

Miscellaneous

Dennis Mason, formerly an administrative technician with U. S. Employment Service, has been named personnel manager for Braniff Airways.

Francis J. Hartley, Jr., of Boston, has been elected a director of Colonial. **Carl L. Anthony** has been appointed assistant secretary of the company.



French

Cline

Hewitt

Beals

Caribbean Routes

(Continued from page 1)

sibility for the "serious" Caribbean transportation shortage.

Because U. S. airlines can get new flying equipment only through allocation by other government agencies, the CAB's purpose in asking for applications "is merely to provide a means for the issuance of certificates . . . to alien companies and corporations . . .," Waterman asserted.

Companies applying to the Board, and the routes sought (all with numerous intermediate points), were:

National Airlines—Miami to San Juan; Miami to Balboa, Canal Zone; Miami to Havana; Miami to Port of Spain, and Miami to Barranquilla, Colombia.

Colonial Airlines—Miami to Trinidad, and from Miami to any other point determined by the Board.

Transportes Aereos Colombianos—Miami to Barranquilla, for carriage of property only.

Aeroplanos de Carga Latino-Americanos—Miami to San Jose, Managua, Tegucigalpa, San Salvador and Guatemala City, for property only.

Transportes Aereos Venezolanos—Miami to Marquetia, Venezuela, for property only.

Expreso Aero Inter-Americano—Havana to Miami, for property only.

Eastern Air Lines—Miami to the Canal Zone, Miami to the Canal Zone (via different points), Miami to Nassau, and Miami to Rio de Janeiro and Buenos Aires.

British West Indies Airways—Port of Spain to Ciudad Trujillo to Miami, and Belize, British Honduras to Miami.

Aerovias Nacionales Puerto Rico—Miami to Central America, Canal Zone, north coast of South America and the islands of the Caribbean Sea.

W. R. Grace & Co. (for Pan American-Grace Airways)—Miami to the Canal Zone.

Waterman Airline—Miami to San Juan, and from Miami to any other point.

TACA—Miami to San Jose, and Miami to Ciudad Trujillo.

KLM Royal Dutch Lines—Miami to Netherlands West Indies.

Compania Nacional Cubana de Aviacion—Miami to Havana.

Chicago & Southern Air Lines—two routes between New Orleans and Balboa, two routes between New Orleans and Port of Spain, and one route from New Orleans to Havana.

Of these 15 applications, the following seven will be considered by the Board:

National, **Expreso Aero Inter-Americano**, **Eastern** (except the Miami-Rio-Buenos Aires route), **British West Indies Airways**, **TACA**, **KLM** and **Aerovias Nacionales Puerto Rico**.

The others were dismissed because

they "do not set forth facts indicating that the applicants have available equipment and personnel to enable them to inaugurate some or all of the services proposed therein immediately."

Eastern's application for Miami-Rio-Buenos Aires was dismissed because it was "not within the scope of the proceeding."

Cubana and **C&S** will not be considered because they filed after the deadline set by CAB.

Inquiries at CAB disclosed that **W. R. Grace's** application was evidently dismissed on a technicality (Grace filed for Panagra, claiming that the 50% of the Panagra board of directors controlled by Pan American Airways would not let that company file in its own name). Grace itself has no flying equipment. CAB's inquiry to determine if Panagra should be allowed a U.S. terminal will continue, it was said.

A study of the applications to be considered by the Board discloses the following:

\$100,000 Capital

Expreso Aero Inter-Americano has been formed by "prominent and substantial business and professional men" in Cuba. Authorized capital stock is \$100,000, of which \$50,000 in cash has already been paid in. A total of \$25,500 has been spent for four Lockheed Vega 5-Cs from **Charles H. Babb**, used plane dealer.

Expreso's officers and directors are listed as: **Dr. Theodore Johnson**, president and director (owner of Johnson Drug Co., said to be the largest wholesale drug concern in Cuba); **M. Kenneth Frank, Jr.**, vice-president-director (to have active charge of operations; now operating a "successful" import and export business in Havana); **William Husted**, vice-president (assistant to the president of Wickwire Spencer Steel Co.); **Dr. Luis Machado**, secretary-director (counsel in Cuba for several U.S. government agencies); **John Horter**, treasurer-director (president of Horter & Co., a leading importing firm); **Manuel Gamba**, director (general manager of Frederick Snare Corp., said to be the largest engineering and construction firm in Cuba); **Dr. Arturo Bengochea**, director ("one of Havana's outstanding lawyers"); and **Ernest Steward**, director (managing director of F. W. Woolworth & Co. of Cuba).

The company states that it could start operations within 30 days after receiving a certificate.

National proposes to use one Lockheed Lodestar presently used in other operations. The company stated that it has Cuban landing rights and can start within 30 days.

Eastern would use DC-3s or comparable equipment, according to the application.

Aerovias Nacionales Puerto Rico proposes to use one Grumman amphibian and one Sikorsky amphibian.

British West Indies Airways' application (Turn to page 30)

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BOMBS AWAY at 270 M.P.H.

Precision bombing, so well carried out by American airmen, requires precision navigation instruments to make it successful. On the new "PIONEER" Sensitive Air Speed Indicator, exceptional accuracy is combined with fast reading. Large numerals on a rotating dial show "hundreds," and a pointer indication registers speeds of "0" to "99."

Like other precision-built "PIONEER" Navigation Instruments, the Sensitive Air Speed Indicator was designed, and is constructed and tested by men proud to help in giving American and Allied fliers the world's best instruments for flight.

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Precision aircraft instruments of the Pioneer Instrument Division are important members of "The Invisible Crew," which includes the equipment and controls built by 15 Bendix Divisions, serving with our fighting crews on every front.

PIONEER INSTRUMENT DIVISION

A "Helldiver" Screams Down on the Target!

**ITS WRIGHT CYCLONE
ENGINE POWERED BY**

SHELL

TAKE-OFF, power dive, pull-out . . . the throttle response of this deadly dive bomber must be instant . . . sure. For on its performance hang the lives of the crew.

That's why in this new Curtiss "Helldiver" (SB2C-1) with its Wright Cyclone engine, and in many of its other ships, Curtiss-Wright uses Shell Aviation Fuels. You'll find this same preference from coast to coast among many plane and engine manufacturers, aviation training schools, transport lines and airports . . . not alone for Shell Aviation Fuels but for AeroShell Oils as well.

Airport operators all over the country have found this fast growing line of Shell Products profitable to handle.

Model of the new Curtiss "Helldiver" (SB2C-1) Dive Bomber shown, courtesy of the Curtiss-Wright Corp., New York, N. Y.



CAB Actions

Order No. 1948

Suspended order dated July 30, 1942, which denied approval of the control of American Export Airlines, Inc., by American Export Lines, Inc., and reopened proceedings for further argument and reconsideration of conclusions.

Order No. 1949

Suspended student pilot certificate No. S-248531 of Robert G. Soule for four months, beginning July 7, 1942, because of various alleged infractions of CAA regulations.

Order No. 1953

Authorized Western Air Lines, Inc., to suspend service as to persons on route 22 from Sept. 26, 1942, to Sept. 30, 1942, because of necessity for repairs and lack of reserve aircraft.

Order No. 1955

Authorized issuance of a certificate of public convenience and necessity enabling Caribbean-Atlantic Airlines, Inc., to engage "in air transportation with respect to persons, property and mail between the terminal point San Juan, Puerto Rico, the intermediate point Ponce, Puerto Rico, and the terminal point Mayaguez, Puerto Rico; and between the terminal point San Juan, Puerto Rico, the intermediate point Charlotte Amalie, St. Thomas, V. I., and the terminal point Christiansted, St. Croix, V. I." At the same time, application of Aerovias Nacionales De Puerto Rico, Inc., for certificate, was denied.

Order No. 1957

Specified that exhibits received in evidence in petition of Northeast Airlines, Inc., for an order fixing compensation for transportation of mail by aircraft, facilities and services in connection with such transportation, on route 27, be withheld from publication until further notice from the Board.

Order No. 1958

Decided that, in the case of American Airlines, Inc., certain information brought out in connection with proceedings concerning compensation, be withheld from publication until further order of the Board. The information consisted of testimony affecting national defense matters.

Order No. 1962

Dealt with response to CAB's request for Caribbean petitions. Some firms, since they filed applications for certificates within the 15 day limit prescribed, will have their requests consolidated for hearing. Because they did not establish that they had sufficient equipment and personnel, some applications were dismissed.

Order No. 1964

Directed CAA's Aeronautical Inspector in the Puerto Rican and Virgin Islands area to make a deposition in connection with the application for temporary certificate of Aerovias Nacionales Puerto Rico, Inc.

Order No. 1965

Rescinded order of May 26, 1942 (Order No. 1764), exempting Eastern Airlines, Inc., from certain provisions of its certificate affecting route 5, because of "unusual circumstances affecting its operations."

Caribbean Routes

(Continued from page 28)

plication was filed by Lowell Yerex, sole owner, who explained that he is now operating between Trinidad and Miami on regular schedule twice weekly for U. S. Army. He would use Lockheed 14-H2 equipment, and added that this equipment and all necessary personnel is now available.

TACA (Yerex is president) also has Lockheed 12-H2, planes. The company is a wholly-owned subsidiary of TACA, S.A., of Panama, the holding company for the entire TACA system. As a consequence of conversations between representatives of the U. S. and Yerex (a British citizen), who has held a majority of the holding company's stock, Yerex has entered into negotiations with U. S. interests looking to a transfer of a majority of the stock of that company to those interests, it was revealed.

Pan American Airways did not file an application in the case, but submitted statement of its position. The company listed its present services in the Caribbean, explaining that these would have been increased some time ago but for the equipment situation.

In spite of this, it said, a second express service is being inaugurated from Miami to the Canal Zone with

Boeing 307 planes; another Miami-San Juan trip has been added; four additional Miami-Brazil flights are expected in October, and by the end of the year the institution of night operations on the trunk route, and other factors, will permit twice daily service to Rio, with northbound flights operating between Belem and Miami in one day.

The Board on Oct. 2 granted PAA permission to intervene in the case.

As this issue went to press, CAB had scheduled a pre-hearing conference, indicating that it contemplated quick action.

The case posed several questions: Will an alien company be allowed to operate into the U. S.? Will an established domestic airline get the route, or routes? Will a new company be permitted to enter the field? Or—will all three of these possibilities materialize?

Aviation observers await the results with interest.

Pat O'Malley with OWI

Patricia O'Malley, chief of CAA's press section, has been loaned to the Office of War Information. She will be connected with OWI's bureau of overseas publications, in New York City.



Triple-threat

One of the best ways to put the squeeze on the Axis is to produce better airplanes, faster.

This giant, triple-action press—using hydraulic, pneumatic and hydromatic pressure—is built for that job.

Built to the specifications of Boeing engineers, this press and a twin at Boeing's Midwest plant are unique in the aircraft industry. They are monsters that form steel, duraluminum or aluminum with equal ease.

The job of this press is to squeeze out airplane parts, to make them exactly alike, and to make them fast.

Right now it is turning out fillets, angles, cowlings, stiffeners, bulkhead channels and exhaust shrouds for the Flying Fortress.*

It makes some of these parts 75 times faster than the machine it replaced.

This performance is one of the many reasons why Boeing production is steadily increasing, why Boeing was selected as the first aircraft company to receive the Army-Navy award for high achievement in production. (The rate of output of Flying Fortresses is now more than three times what it was on the day of Pearl Harbor.)

The pressure is on at Boeing, day and night. This heavy press, by no means the most powerful of the Boeing presses, is a symbol of efficiency in airplane production. It is one of a team of presses, one of a team of thousands of machines, part of the unbeatable American system of combining men and machines to shape our ends.

The increase of efficiency in manufacture . . . for peace and war . . . is only one of the many different projects that form a constant part of the Boeing engineering schedule at Seattle and in the Middle West and Canada.

DESIGNERS OF THE FLYING FORTRESS • THE STRATOLINER • PAN AMERICAN CLIPPERS

BOEING

*THE TERMS "FLYING FORTRESS" AND "STRATOLINER" ARE REGISTERED BOEING TRADE-MARKS

TRANSPORT

Traffic

American Airlines in August flew 627,642,507 pound miles of air express and freight, compared to 240,461,886 in August, 1941, an increase of 161%. Express carried in August, 1942 was 1,221,583 lbs., contrasted with 542,878

lbs. in August, 1941, a gain of 125%. In the first eight months of 1942, AA transported 6,802,786 lbs., against 3,309,800 lbs. in the same period of 1941, an improvement of 105%.

Northwest Airlines reports sizeable gains in air mail. In August, the company's planes carried 257,394 lbs. of mail, against 243,926 in July, and 240,-

862 lbs. in August, 1941. The firm operated 219,963,892 pound miles in August, 1942, compared with 209,169,046 in July, and 176,818,130 in August, 1941. Indicating express shipments are now spread over 24 hours of the day, NA said it carried 120,743 lbs. of air express in August, 1942, and that it operated 93,892,553 air express pound miles in the same month.



Opening bottlenecks in production and closing gaps in supply lines... with skilled air transportation... is Western Air's specialty. Ours is a dual wartime job... for the Army and for Civilian War Industry.

One, is a flexible military cargo service operated by Western Air pilots and operations men... flying anywhere... anytime the Army asks.

The other is Western's regular commercial transport service which continues to save thousands of hours for important mail, express and civilian passengers. Phone us for official information on air travel.



WESTERN AIR LINES

General Traffic Office—510 West Sixth Street, Los Angeles, California

UAF Ordered to Cease Operations

The Civil Aeronautics Board has ordered Universal Air Freight Corp. to cease engaging in air transportation without an operating certificate of convenience and necessity.

UAF, a wholly-owned subsidiary of U. S. Freight Corp., has been operating since July 10, 1941, in the business of forwarding air freight by collecting packages from original shippers and consolidating such packages into larger packages for shipments in bulk over the domestic airlines, CAB said.

Through this operation, it continued, UAF was indirectly engaging in air transportation, and its activities were required to be authorized by a CAB certificate, unless it was exempted from the provisions of the Civil Aeronautics Act.

"No certificate has been issued to respondent, nor has it been exempted... Accordingly, we find that respondent has violated and is violating the provisions of section 401 (a)," the Board ruled.

Noting that UAF has requested an exemption, the decision said:

Operated At Loss

"Respondent's present activities have been carried on at a loss and respondent's general manager testified that this has been done to gain experience which it believes would be useful to it in the activities proposed in an application for a certificate of public convenience and necessity filed by it with the Board. Many applicants for certificates would undoubtedly deem it highly desirable to obtain exemption so as to be permitted to perform all or part of the services they propose without waiting for the issuance of a certificate. It seems obvious, however, that the Board should order such exemptions only in instances where it appears that compelling reasons of public interest demand the exemption. The mere fact that the exemption would be to the individual interest of the prospective exemptee is not enough.

"The Board does not desire in this proceeding to be understood as approving the rates charged by Express Agency. It might seem at first blush that the much lower rates available to the shippers of small packages as charged by respondent would constitute an argument in favor of granting respondent an exemption. However, in view of the fact that respondent's operations have been conducted at a loss, it is necessary to anticipate either a large improvement in financial results of its operations or a substantial increase in its tariffs. It is but natural to expect that respondent would make rates as low as possible in order to gain favorable consideration in its attempt to enter this field. However, we must balance the advantages to air transportation of lower tariffs with the possibilities that such tariffs will not remain at such a low level against the method used by respondent in attempting to gain entry into this field."

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Hitching-up 2,000 horsepower

What are the time saving, efficient ways to handle today's production . . . service . . . or testing problems for today's aircraft?

What equipment will those same operations need tomorrow? These are your problems.

Whiting Aviation Division has the air-experience and engineering to cooperate with you in solving them.

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Main Office and Plant: 15647 Lathrop Ave., Harvey, Ill.
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Design Specs Need 'Ground Time' Analysis

Detailing "Maintenance Minutes" for Future Transport Design Will Boost Efficiency, Writer States

By E. J. FOLEY

DESIGN specifications for air transport aircraft may be partly to blame for our never having seen a *transportation vehicle with wings*.

There's more to our airliner design, in our opinion, than that it shall fly fast and safely, carrying good payload without exhausting the crew. Our specifications must start on the ground, unless our aircraft are going to stay on the ground.

Mr. Aircraft Manufacturer: In 194X you are going to read a set of design specs written by an airline operator's engineering staff to cover a fleet of 40 deluxe passenger craft. We hope it will not be a shock to you to find that something new has been added to the familiar sounding . . . "the aircraft shall carry 100 passengers at a 55% power cruising speed of 300 m.p.h." . . . "adequate instrument lighting will be provided on each panel to minimize crew fatigue" . . . "all electric motors shall be explosion-proof" . . . etc. We feel certain

that "something new" will be there . . . specifications will start on the ground.

We feel this presentation in order at just this time upon consideration of two of today's most vital activities: mass production of

military aircraft by the manufacturers and the mass operation of "military" aircraft by the airlines.

In our opinion it is never harmful to revert to the single underlying principle of all air transport operation. "Keep 'em flying" was an airline precept long before World War II popularized it.

Two threats to our maintaining top flight efficiency in operation spring from the single devastating factor of time on the ground: maintenance time and handling time. Unfortunately, neither of these elements will automatically lessen in effect with the increasing size of aircraft or the global expansion of our transport networks.

We've got to whittle them down ourselves. And, Mr. Aircraft Manufacturer, since your product is the prime factor in our work, the hub around which all our activity centers, it appears logical that we should start our whittling on it.

Work correctly initiated and followed through to the finish makes for a mutually successful product; injection of radical changes at the half-way mark makes expense and enemies. So it would appear that our joint effort to create the aircraft ideally suited to the Goldwynesque adjectived era of air transport ex-

pansion ahead might well be started in the design specification stage.

Our proposed expansion in the scope of design specs is devised to "nip in the bud" as much of the ground time extravagance due to maintenance considerations as possible. It is an outgrowth of our complaint in these columns last issue regarding the dictation (by the manufacturer) of "possible hours" of flying inasmuch as he builds in whatever internal cleanliness exists in the design.

Incidentally, we define internal cleanliness as a desirable and necessary factor in the design of efficient air transport aircraft, embracing such advantages as maximum accessibility, strict interchangeability and wide application of the "quick disconnect" principle, farsighted serviceability evident in detail and assembly and simplicity in secondary design.

Our quarrel (if you will call it that) with design specifications as they exist today is that to us they resemble a ladder with only one sidepiece. We specify in detail, the safety we want in the air, the speed we want in the air, the loads we want to carry over certain distances in the air, the facilities we want available in the air.

Our "in the air" sidepiece of the ladder on which we hope to climb

to peak airline performance is on the ground, well fixed and adequately protected. Our "on the ground" sidepiece is in the air, definitely.

The remedy? To our way of thinking it consists of the preparation of a comprehensive set of ground specifications, comparable to the flight specifications that we currently establish.

We can parallel our data item for item. Specify the safety we want on the ground against costly maintenance errors, the result of inadequate information; the speed we want on the ground in the completion of certain work items; load of serviceability we want to see evident in our ground work in the form of resistance to vibration, green personnel, etc., and the facilities we want available on the ground to redo, see, and know all that the manufacturer did at initial assembly.

Speed On Ground

Most receptive to immediate consideration is the point of speed on the ground. The form to be taken by this phase of our specifications might well be based upon a man-minutes-required-per-change analysis of the entire airplane. This approach is most effective if we are considering future air transport maintenance as a decentralized, work-away from the airplane, mass production problem. However, the same analysis would have appreciable value in working on the periodic overhaul theory.

Specific examples of the requirements as we would phrase them follow: . . . "the removal of such cowlings as required to provide access to all engine cylinders must be accomplished in three man-minutes per engine" . . . "complete nacelle change (removal and installation) to include mount, accessories, etc., shall be accomplished in eighty-man minutes, a maximum of four men for twenty minutes" . . . "rudder

change to be accomplished in eighty man minutes" . . . etc.

This analysis should be accomplished for each and every component and system-part on the aircraft with such exceptions as are obvious. The pitot head, the booster coil, the instrument panel, the fuel transfer pump or the fire extinguisher selector valve, can individually be as big a headache as the nacelle, unless proportionate consideration is given to all in establishing our limits.

Not Solution

The fact that we can change everything we want to change in the desired length of time does not of necessity represent the told solution of our speed on the ground phase of design specifications. There are many things we may never need to change, or may need to change rarely if we can see them in a hurry.

Accordingly, where change is not the criterion but "check" is, we should establish accessibility-time specifications. For example . . . "water tank interiors shall permit complete inspection in thirty man minutes" . . . "all control cable connections shall admit accessibility for complete inspection in 150 man minutes" . . . etc.

It's obviously impossible for the operator to sit down, head in hands, and dream up all or any of these time limitations. If they assume some general form such as "shortest possible time" they lose their teeth and all value. The figures we have used are purely fictitious; probably most are optimistic. In final form they must be possible, practical and specific. The basis for their prediction must be made up of: productive capacity of specialist shops; utilization of the aircraft; practical limitations of the particular unit; airline service experience and the great wealth of design suggestions it has to offer; anticipated frequency of change or inspection; time required for overhaul or ordinary maintenance of the part, etc.

Equipment Important

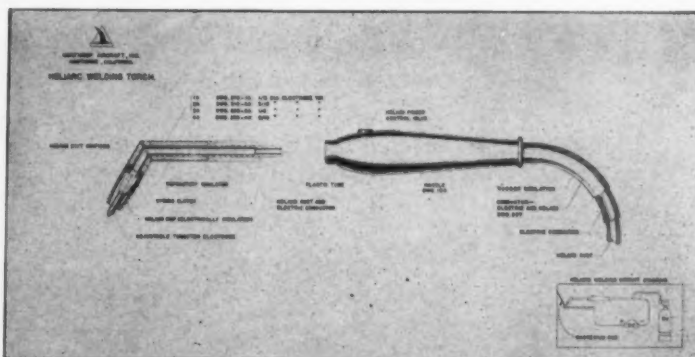
Similarly, it would take a lot of nerve to specify that a rudder, normally at a height of thirty feet from the ground, must be changed in eighty man minutes unless the equipment to be employed or the operator's procedure for getting to the rudder was considered in detail. Eighty man minutes on a specially designed stand or with the aircraft in a drop pit may mean an eternity with two men on twenty-eight foot ladders, regardless of the designed time-to-change limits.

Thus, the problem of how the operator shall carry out his basic maintenance technique must be decided upon before accurate determination and/or effective utilization of these limits is feasible. If we're setting up limits as tightly

(Turn to page 42)



E. J. Foley



Heliarc Welding: The result of research over a two-year period by Northrop Aircraft, Inc., is "Heliarc" welding which makes possible the use of welded magnesium sheet, tubing and extrusions in aircraft construction. Using helium gas and a tungsten electrode, the Heliarc process is said to be applicable also to metals other than magnesium.

Above is shown a diagram of the Heliarc torch.

Auto Transformer Controls Brightness of Airport Lights

A new auto transformer developed by General Electric Co., Schenectady, N. Y., allows control-tower regulation of runway and contact lights to any one of five degrees of brightness. It is said that the application of this device provides adequate lighting for incoming or outgoing friendly aircraft and yet allows reduction in the range from which the airport can be spotted by hostile planes.

Energized by a standard Novalux series, constant current transformer, the 5-tap units offer 100%, 30%, 10%, 3%, and 1% of normal brightness. The constant current supplied to the auto transformer can be reduced to the predetermined current value corresponding to desired brightness by means of remotely operated tap changing switches.

Whiting Introduces Propeller Trailer

The Aviation Division, Whiting Corp., Harvey, Ill., has recently introduced the Whiting Propeller Trailer, a specially-designed unit that simplifies the handling and storing of all standard aircraft propellers.

In design, all unnecessary elements have been eliminated to provide maximum accessibility and easy maneuverability. The changing, servicing and storage of propellers may be carried out with the trailer, and full blade protection is assured by the manufacturer.

Applicable to hangar or field service, the unit may even be hitched to car or truck singly or in train for cross country movement of propellers. Steel tube construction provides a high strength-weight ratio. Front wheels may be locked and swiveling stopped by a two-way brake.

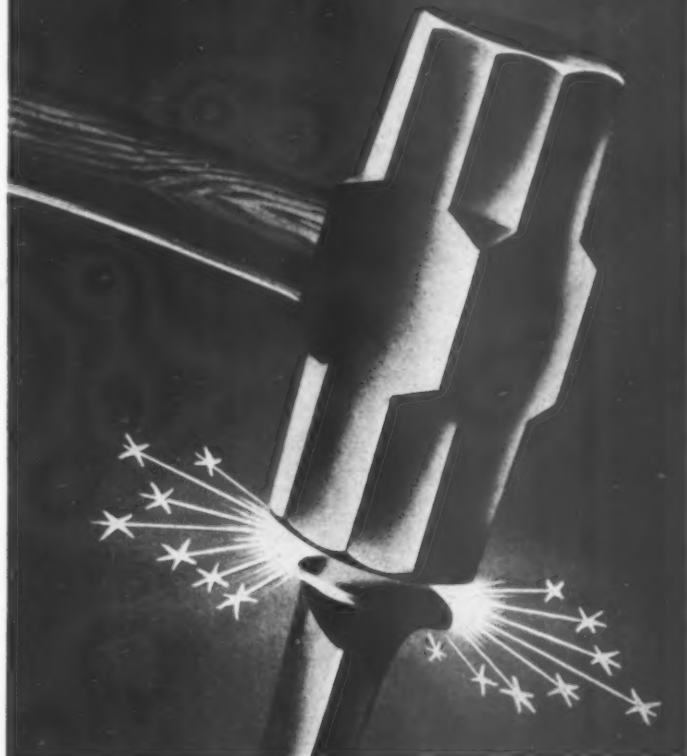
Nigg Develops New Cowl Fastener

The Nigg Fastener is a cowl fastener development worked out by Nigg Engineering Co. of Covena, Cal., in collaboration with the engineering departments of several major aircraft companies to meet the critical stresses imposed in high speed aircraft.

Unlike similar devices, the Nigg fastener locks and unlocks by means of a screw action which produces any desired amount of tension to hold the sheets together and it is not dependent in any way upon springs. About 50% fewer stock sizes are required, it is claimed, since the screw action provides an adjustment which accommodates wide variations in sheet thicknesses for each size of fastener.

Army acceptance test reports show the -7 size Nigg Fastener to have ultimate tension of 1600 pounds average (50% greater than AN specs); ultimate shear loads average 2700 lbs. (250% in excess of AN specs).

CARBON DIOXIDE



POWERHOUSE of energy!

EVER see carbon dioxide gas in its working clothes?

You've seen it in other ways. Carbon dioxide is the bubbles in champagne; it is the fluffiness in biscuits; it's the "head" on a glass of beer. Yet we know carbon dioxide as one of the deadliest of fire-killers. We use it that way in Kidde Extinguishers.

There's another thing about carbon dioxide . . . it is the most compressible of the industrially available gases. Under 850 lbs. pressure at 70° F. carbon dioxide is a liquid. When released, it becomes a gas, expands 450 times its former stored volume!

Harness this terrific expansion and you have a source of quickly available power, produced by the turn of a valve. There are 30,000 foot pounds of energy in a single pound of carbon

dioxide. Compressed nitrogen, for example, delivers only one-third as much energy.

Engineers of Walter Kidde & Company have designed valves which release this energy in an instantaneous burst, or which apply the power over a prolonged period, a bit at a time. "Peanut-size" cylinders or 100-lb.-capacity bottles hold the charge.

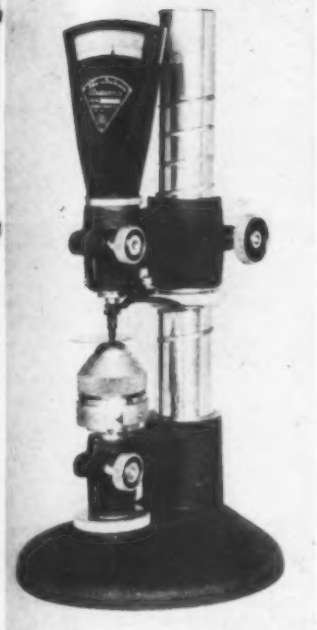
If you have a problem involving power actuation, consider carbon dioxide. Its high factor of available energy gives this gas a tremendous significance to the aeronautical engineer. The Research and Development Department of Walter Kidde & Company has evolved interesting applications of power actuation using carbon dioxide under high pressure. Please consult us, if we can assist you.

Kidde



Walter Kidde & Company, Inc.

1039 WEST STREET, BLOOMFIELD, NEW JERSEY



Accurate: Using this new ball measuring anvil with the Com-paritol, both manufactured by George Scherr Co., Inc., 128 Lafayette St., New York, the thickness, flatness and parallelism of extremely thin material, shims, laminations, etc., may be rapidly checked. It is claimed that the ball principle eliminates any distortion or bending.

Describe Wind Indicator

In their recent Bulletin 6500, W. and L. E. Gurley, Troy, N. Y., outline the data regarding their Wind Direction Indicator. The major components are a four-foot balanced metal arrow and a seven-inch diameter direction dial. Each component is coupled to a Selsyn motor, and self synchronizing, the rotors assume the same position when energized. A 110-volt 60-cycle AC 5-wire system is required, and operation is practical even though transmitter and indicator are separated by several miles. Two models, Standard and Precision ($\pm 5^\circ$ at 5 m.p.h. and $\pm 1^\circ$ at 5 m.p.h.) are available. Strip chart recorder may be used if desired.

BJU Aircraft Relay

A recent addition to the field of aircraft electrical controls is the BJU Aircraft Relay manufactured by Allied Control Company of New York City. A latching relay, it requires only the momentary application of current to the coils to lock the unit in the appropriate position. Other data are: 4-pole double throw, maximum rating 5 amps per contact, non-inductive, available for AC or DC. The weight of the BJU is 7 ounces; dimensions 1 5/16 by 1 13/16 by 2 inches. Army, Navy and CAA specs are said to be met by this model.

8 Manufacturers Form East Coast Aircraft War Production Council

Firms to Make Data Available To All Industry

EIGHT Eastern manufacturers of airframes and engines acted to step up war production efficiency on Oct. 2 with organization of Aircraft War Production Council, Inc., East Coast, and election of Guy Vaughan, president of Curtiss-Wright, as its first president. Mr. Vaughan was leader of the eastern movement.

Although a separate corporation, the new unit is patterned after and will benefit from the successful experience of the original AWPC, formed by Los Angeles and San Diego airframe companies more than six months ago. Both are non-profit enterprises, intended to meet war-time conditions.

Associated in the new group are Aviation Corp., Bell Aircraft Corp., Brewster Aeronautical Corp., Curtiss-Wright Corp., Eastern Aircraft Division of General Motors Corp., Fairchild Engine & Airplane Corp., Glenn L. Martin Co., and Republic Aviation Corp. All retain their individual identities.

The announcement that was released in Washington was distributed to local newspapers by the Aeronautical Chamber of Commerce, with which both Councils are cooperating in every industry-wide matter.

United Aircraft Corp. and Grumman Aircraft Engineering Corp. have not yet joined the new association, although both participated in original discussions.

The Eastern Council invited accessories and equipment manufacturers into its ranks but the largest such firms, Sperry Corp. and Bendix Aviation Corp., were not charter members. Curtiss-Wright and Fairchild manufacture engines as well as airframes, while the West Coast Council comprises only the eight airframe companies in the Los Angeles area.

Mr. Vaughan, in emphasizing the



Form East Coast Council: These warplane builders have formed the Aircraft War Production Council, Inc., East Coast. Through it they will pool their facilities to speed maximum production. Seated, left to right, are Glenn L. Martin, president of Glenn L. Martin Co., and vice-president of the new council; Guy W. Vaughan, president of Curtiss-Wright Corp., and president of the council; Victor Emanuel, president, The Aviation Corp. Standing, left to right, are O. L. Woodson, vice-president of Bell Aircraft Corp.; Ralph S. Damon, president, Republic Aviation Corp.; J. Carlton Ward, Jr., president of Fairchild Engine & Airplane Corp.; L. C. Goad, general manager, Eastern Aircraft Division of General Motors Corp., and George Chapline, vice-president, Brewster Aeronautical Corp.

value in exchanging information, engineering data and manufacturing processes, said all information and technical information developed by the new Council will be made available to all airframe manufacturers engaged in war production, wherever located in the United States. Close cooperation is planned with the West Coast Council, Automotive Council for War Production, and various government and industrial agencies.

Board of directors comprises the head of each member company:

Victor Emanuel, president of Aviation Corp.; L. D. Bell, president of Bell; C. A. Van Dusen, president of Brewster; Mr. Vaughan; L. C. Goad, general manager of GMC's Eastern Aircraft Division; J. Carlton Ward, Jr., president of Fairchild; Glenn L. Martin, president of the company bearing his name; and Ralph S. Damon, president of Republic.

Mr. Martin was elected first vice president of the Council and Miss J. M. Scanlan, assistant secretary of Curtiss-Wright, was elected secretary and treasurer. First meeting following organization was scheduled at the Martin plant near Baltimore on Oct. 12. Committees were planned to cover engineering, production, materials, transportation, training, plant protection, housing and other subjects.

Ryan in Production on Navy Scout Plane

Volume production of the SOR-1 scout observation plane, for long range Naval scouting missions, is now under way at the Ryan Aeronautical Co., San Diego, Cal. President T. Claude Ryan revealed Oct. 9 that his firm has signed contracts with the Navy for manufacture of this ship.

Outstanding qualities of the SOR-1 are said to be its long cruising range and ability to maneuver and land at low speeds. The plane "is convertible to either wheel landing gear or floats and is designed primarily for catapult operation from shipboard for scouting and anti-submarine work."

In structure, the SOR-1 is a mid-wing monoplane. It is powered with a Ranger inverted "V" type in-line 12 cylinder air cooled engine.

Incorporations

Arizona — Williams Flying School, Phoenix. 1,000 shares, n.p.v.

Indiana — Marlon Flying Service, Inc., 424 Glass Block, Marion. 2,000 shares, n.p.v. Incorporators: Bryant M. Bouslog, Charles Richards and Ralph W. Pack. Agent, Ralph W. Pack, firm's address.

Massachusetts — Aircraft Production

Contract Appeal Board Set Up

A three-man board, known as the War Department Board of Contract appeals, constituted by Secretary Stimson on August 8, has been established in the office of the Under Secretary of War, Robert P. Patterson.

It will act as an authorized representative of the Secretary in rendering final decisions on appeals which formerly required action by him.

War Department contract forms, many of which do not authorize the appointment of such a board to speed adjudication of contractual appeals from decisions of contracting officers and chiefs of supply services, are to be amended to make provision for its authority and decisions, the Department announces.

Under the rules and procedure which have just been made public, a majority of the members of the Board must agree upon a decision, failing which the appeal will then be submitted to the Under Secretary of War for final determination.

The new procedure does not relieve the chiefs of the supply services of any contractual duty to determine appeals. Contract settlement boards, generally known as appeals boards, in the offices of the chiefs of the supply services, authorized by the P. & C. General Directive No. 72 of November 7, 1941, will continue in an advisory capacity to the chiefs with respect to appeals which the chiefs of supply are authorized to make. Their opinions, which may be subject to final appeal to the Secretary of War, will be submitted to the new board instead.

Colonel Hugh C. Smith of The Judge Advocate General's Department, a former Assistant Judge Advocate General and a member of the War Department Board of Contract Adjustments during the last World War, is President of the board. Associated with him are Major Eugene E. Pratt, Judge Advocate General's Department, who is a member of the Supreme Court of Utah, on leave from that court, and Major Roswell M. Austin, formerly Secretary-Manager of the National Memorial Association of St. Albans, Vermont, recently commissioned in the Army of the United States. Lieutenant Colonel Paul G. Thompson of The Judge Advocate General's Department, for many years with the Interstate Commerce Commission, has been appointed recorder. Lieutenant Colonel Joseph A. Avery, Judge Advocate General's Department, of South Bend, Indiana, is trial attorney for the board. The appointments were made by the Secretary of War upon the recommendation of the Under Secretary of War.

Corp., 62 Harvard St., Brookline. To manufacture and promote aircraft production. Sept. 2, 1942. 60 shares, n.p.v. President, Isaac Kaplan; treasurer, William Sacks, 143 Garden St., Brookline. Also, Benjamin Sacks, Brookline, and Simon Kaplan, Wellesley.

New York — Epison Aircraft Corp. New York. Aircraft parts, etc. 300 shares, n.p.v. L. H. Grant, Stationers, Inc., 299 Broadway, New York City.

AIRCRAFT MANUFACTURERS

Large Private Airport, Steel Hangar and Aircraft Manufacturing Building available to lease. Metropolitan New York area, 60,000 square feet of excellent plant manufacturing facilities, unexcelled rail and highway transportation, permissible to use airport for flight testing, deliveries, etc. Excellent set-up for Aircraft and glider production, or for industry that can utilize this 400 acre airport in conjunction with existing manufacturing facilities.

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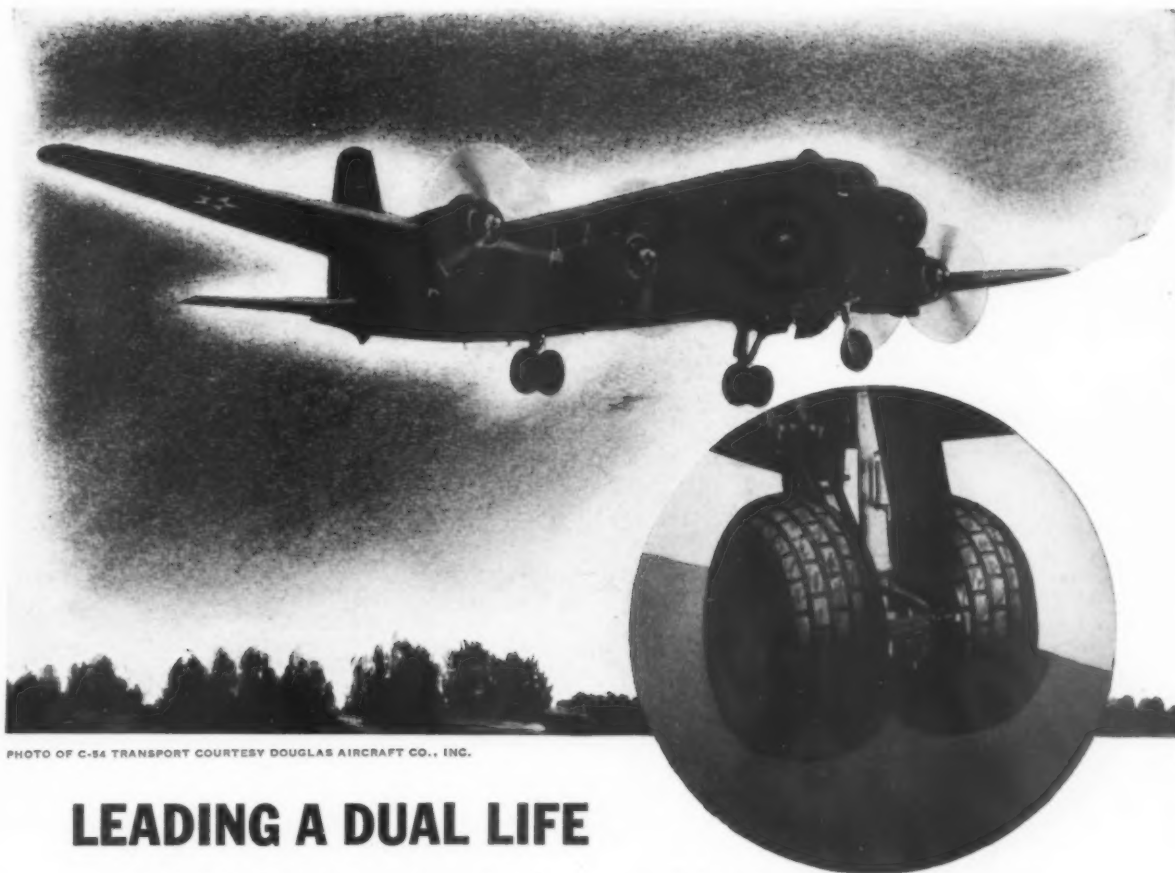


PHOTO OF C-54 TRANSPORT COURTESY DOUGLAS AIRCRAFT CO., INC.

LEADING A DUAL LIFE

WHAT landing gear to put on such a big ship and where to put it were the problems handed to "U. S." engineers.

One of them suggested dual wheels and tires. Experiments with airplane duals showed greatly increased flotation. They spread the load over more surface, increased the usefulness of this plane by multiplying the number of places where it might land and take off.

Other advantages developed,



too. With *dual tires* retracting space was better designed and more compact. Tires could be smaller, lots easier to install and to service.

So airplane tires now lead a dual life. Performance is increased; everyone is happy.

Could you make use of practical field assistance on tire and undercarriage problems? There is a whole staff of "U. S." field engineers ready and eager to jump at problems like that.

ONLY "U. S." HAS THESE EXTRAS

- 1 **TEMPERED RUBBER TREAD**—A tougher, scuff- and heat-resistant tread compound for airplane tires.
- 2 **SAFETY BONDED RAYON CORD** — A lighter, more resilient, airplane tire material with tremendous impact resistance and stamina at high temperatures.
- 3 **FIELD AIRPLANE TIRE SERVICE**—A force of "U. S." field engineers in every part of the country is promptly available for engineering and technical help on tire and undercarriage problems.
- 4 **"U. S." ICE GRIP TREAD**—A tread of revolutionary design and performance for snow- and ice-covered landing surfaces.
- 5 **STATIC GROUND CONSTRUCTION** — Conductive rubber construction grounds static electrical charges upon contact with the ground. This safety feature is available in every U. S. Royal Airplane Tire.

RAYON IN EVERY U. S. TIRE — A U. S. TIRE FOR EVERY PLANE



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Today's Emergency CALLS FOR MEN OF LEADERSHIP QUALITY

Changes in personnel, the requirements of America at War have made it essential that men in commercial aviation be capable of handling the job in hand and equipped to look ahead as well.

Parks graduates are qualified to rise to leadership because of the thoroughness of their training—they are educated to develop their capabilities for future increasing responsibilities.

Whether in piloting, operations, maintenance, or manufacturing, today's emergency demands the finest available manpower.

When you need men who are qualified to look ahead with you to future progress, write or wire Oliver L. Parks, President.

**PARKS AIR
COLLEGE, Inc.**
East St. Louis, Illinois

Aircraft Wage Stabilization Conference Reconvenes

The wage stabilization conference of the industry on the West Coast, which recessed in July, has reconvened in Los Angeles under the chairmanship of Paul R. Porter of the War Production Board. Accompanying Mr. Porter is Arnold Tolles of the Bureau of Labor Statistics, who will act as technical advisor.

Decision to reach a wage determination governing the Pacific Coast aircraft industry followed a telegraphic poll of the members of the conference by Mr. Porter, who was also chairman of the July meeting.

An agreement had previously been reached between the National War Labor Board and the War Production Board specifying that the former agency would take over responsibility for stabilization plans. It is understood in Washington that while other government agencies and departments may "sit-in," all active participation such as aroused conflict in the previous meeting has been ruled out. On the other hand, the new anti-inflation law governing wages may cause some changes in the scheduled procedure.

In announcing the new conference, the National War Labor Board stated that it was merging with the rest of the industry the dispute between North American Aviation, Inc., and UAW-CIO on which mediation hearings have recently been held. Another West Coast aircraft controversy certified to the Board involved Vultee Aircraft, Inc., and UAW-CIO. On the new case file at the National

War Labor Board are wage and contract disagreements of Boeing Aircraft Company and Lockheed Aircraft Corporation with IAM-AFL locals.

The International Association of Machinists is the American Federation of Labor union which is a member of the conference. It currently has agreements with Boeing Aircraft Company, Consolidated Aircraft Corp., and the Lockheed and Vega aircraft companies. The United Automobile Workers of America, CIO, represents, in addition to the employees of North American Aviation, Inc., and Vultee Aircraft, Inc., the employees of the Ryan Aeronautical Company. The two other companies in the area, the Douglas Aircraft Company, with three plants and the Northrop Aircraft, Inc., do not have contracts with either AFL or CIO unions.

The procedure to be followed has been agreed to by the aircraft companies and unions. After the wage hearing a complete transcript with analysis and recommendations is to be transmitted to the National War Labor Board at Washington, and to the parties, for their comments. A final hearing will then be arranged before the Board in Washington in accordance with the Board's established procedure. All items on the agenda, other than wage issues, will be disposed of by the conference itself at a reconvened session immediately following the hearing on wages.

Tax Deductions Continued on Advt. Expenses

"Reasonable" advertising expenditures will still be allowable as deductible business expense in computing taxes, Commissioner Guy T. Helvering of the Bureau of Internal Revenue explained in a formal clarifying statement issued Sept. 23.

"The Bureau," he said, "realizes that it may be necessary for taxpayers now engaged in war production to maintain, through advertising, their trade names and the knowledge of the quality of their products and good will built up over past years, so that when they return to peacetime production their names and the quality of their products will be known to the public."

6 Factors

Decisions as to which expenditures are allowable will be controlled by these factors: "(1) the size of the business, (2) the amount of prior advertising budgets, (3) the public patronage reasonably to be expected in the future, (4) the increased costs of the elements entering into the total of advertising expenditures, (5) the introduction of new products and added lines, and (6) buying habits necessitated by war restrictions, by priorities and by the unavailability of many of the raw materials formerly fabricated into the advertised products."

Helvering explained that "reasonable expenses incurred in advertising and advertising technique to speed the war effort among their own employees, and to cut down accidents and unnecessary absences and inefficiency, will be allowed as deductions. Also reasonable expenditures for advertisements including the promotion of government objectives in war time, such as conservation, salvage or the sale of war bonds, which are signed by the advertiser, will be deductible provided they are reasonable and are not made in an attempt to avoid taxation."

And, he added, "No definite rule for determining what is reasonable in the case of expenditures for advertising can be laid down in advance so as to fit all situations and all classes of taxpayers."


du Pont claims, to install these rivets at the rate of 15 or 20 a minute, compared with only two to four a minute for most "blind" fasteners.

Explosive Rivets Speed Aircraft Repairs

A new type explosive rivet makes it possible to repair damaged aircraft at military aviation depots in hours instead of days, according to E. I. du Pont de Nemours and Co., Inc., Wilmington, Del., which introduced the rivet about a year ago for production use.


The new rivet, which is made of aluminum alloy and weighs only about one-fourth as much as most "blind" fasteners, has a high explosive in a cavity at the end of the shank. When heat is applied to the rivet head by an electric gun, it detonates the charge. This expands the shank end and forms a "blind" head, setting the rivet. All the movements of this operation can be done from one side.

It is possible for one workman,




RECOGNIZED LEADERSHIP

Meticulous craftsmanship best characterizes production at the Pioneer Parachute Company. Unhurried and painstaking, experienced men and women work with scientifically pre-tested materials. Pioneer standards of absolute safety set the careful tempo. Flyers in every branch of aviation rely on this insurance of Pioneer perfection.



PIONEER PARACHUTE COMPANY, INC.
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FINE AIRCRAFT ENGINES

★ AIRCOOLED MOTORS CORP., SYRACUSE, N. Y.

Liberators Strike Far and Wide



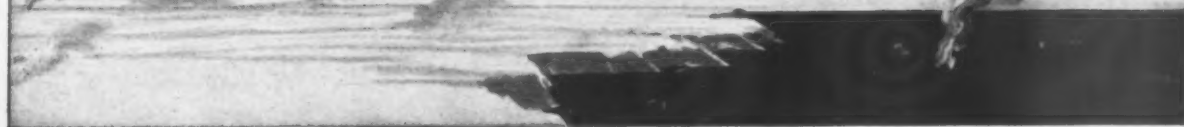
After ten months of all-out war, Consolidated Liberators have emerged as among the most versatile bombers in the world. Whether pounding the Axis with their destructive might or ferrying men and materials across the seven seas, these B-24's range far and wide to carry the fight to the enemy.

All are powered by dependable Pratt & Whitney Twin Wasp engines.

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After a
DOG FIGHT
- NEW RIVETS!

Cherry Blind Rivets
will fix it Fast!

PHOTO COURTESY ANDERSON AIRPLANE SCHOOL

A damaged aircraft rivet of any standard type can be replaced easily and quickly with a Cherry Blind Rivet. The old rivet is drilled out and replaced with a Cherry Rivet which is headed up by one man from one side of the work with either hand-operated or pneumatic gun. The projecting stem is trimmed flush and the job is finished.

NO BUCKING BAR USED

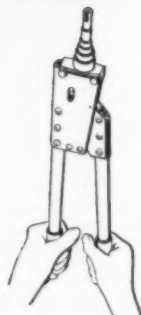
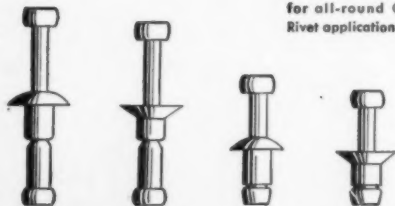
There's no inner skin to remove—no crawling and reaching through inaccessible structures with a bucking bar. The rivet heads itself by means of a double-headed mandril passing through the rivet. A special gun pushes on the rivet head and pulls on the mandril. As the mandril is pulled through the rivet, it expands the shank, forms a tulip head on the blind side and permanently plugs the rivet.

Factories Save Time Too

In addition to field repair, millions of Cherry Rivets are used to speed production and save money in America's aircraft plants when blind or hard-to-get-at spots are encountered in new structures. Complete information will be sent on request.

From left to right, the self-plugging type with brazier and countersunk heads—the hollow type with both styles of heads.

MANUFACTURED UNDER U. S. PATENT NUMBER 2,183,543 AND OTHER PATENTS PENDING



The G-10 Ratchet-type Hand Gun is a highly practical tool for use when compressed air is not available.



The G-15 Pneumatic Gun is the most efficient for all-round Cherry Rivet application.

Cherry Rivet
Company
LOS ANGELES, CALIFORNIA

Manufacturing Personnel



Wade

Kraschel

Morris

Oille

W. A. Newman, managing director of Federal Aircraft, Ltd. since 1941, succeeds Ray Lawson as president, according to the Dept. of Munitions and Supply, Ottawa. Lawson becomes chairman of Federal Aircraft's board.

Thomas F. Morrissey, formerly assistant district manager of the AAF western procurement district, has been appointed director of planning and engineering at Lights, Inc., Alhambra, Cal. Victor G. Paradise, former officer and director of Morrow Aircraft Corp., San Bernardino, Cal., has been appointed director of Lights' sales.

Globe Aircraft Corp., Fort Worth, Texas, announces appointment of N. W. Oille as comptroller. He was formerly with the contract audit section of the AAF, in residence with several manufacturers.

Election of Stevens H. Hammond as executive vice president and chief of the executive staff of the Whiting Corp., Harvey, Ill., is announced. Howard D. Grant was elected president. D. Polderman, Jr., formerly in charge of the New York district office, will assist Hammond in sales and customer service.

Elbert E. Husted, former general sales manager of Titeflex Metal Hose Co., Newark, N. J., has become president, succeeding C. W. Fletcher, deceased.

Leonard W. Reeves, former acting manager of Thompson Products, Inc., Cleveland, O., has been appointed vice president and general manager of the manufacturing division of Toledo Steel Products Co., a subsidiary of Thompson.

Harold P. Wade has been appointed general manager of Adel Precision Products Corp., Burbank, Cal. From last March until this appointment, Wade was manager of Adel's engineering office in Detroit. He was formerly production-engineering coordinator for Lockheed Aircraft Corp.

Robert F. Morris, formerly a flight supervisor for the CAA, has joined the Bell Aircraft Corp., Buffalo, N. Y., to do production test flying. Richard N. Kraschel, previously a ferry pilot, was appointed to Bell's test flight section along with Morris.

G. A. Robertshaw has resigned as vice president and director of The Reynolds Metals Co., Richmond, Va.

F. M. Hoefler, former vice president and general manager of Harvill Aircraft Die Casting Corp., Los Angeles, Cal., has been elected president of that firm. He succeeds H. L. Harvill, who retired last July. Warren Stratton, company attorney, was named a director.

Charles H. Gale, aviation writer, editor and public relations man, has joined the public relations staff of the Fairchild Engine and Airplane Corp., New York City. Gale was editor of *The Sportsman Pilot* for six years previous to accepting this position. He will work with Joseph E. Lowes, Jr., director of advertising and public relations at Fairchild.

Herbert E. Smith was recently elected president of the U. S. Rubber Co. at a special meeting of the firm's board of directors. Smith was also elected chairman of the executive committee and a member of the finance committee. He has been with this company 29 years, and was previously vice president and a director.

T. Randall DuBois has been appointed plant manager of the Ramsey Accessories Mfg. Corp., St. Louis, Mo., according to president J. A. Ramsey. DuBois was formerly with the Bendix Products Division of Bendix Aviation Corp., South Bend, Ind.

New general sales manager at Elastic Stop Nut Corp., Union, N. J., is Thomas H. Corpe, formerly assistant general sales manager at Lockheed Aircraft Corp., Burbank, Cal.

Read 'em and Weep

(for the Japs
— if you can)



The Bomber That Broke the Japs' Hearts at Midway



MARTIN BOMBERS SINK JAP CRUISER

Direct Hit Scored On Plane
Carrier In Aleutian
Island Battle

United States torpedo planes sank a Japanese cruiser and scored a direct hit on an aircraft carrier of the main Japanese task force attacking the Aleutian Islands, it was reported today.

Allies Compare Planes:

Martin Bombers Best Against Foo

By HAROLD GUARD
United Press Staff Correspondent.

SOMEWHERE IN AUSTRALIA, Aug. 7.—Eight months of war have taught the Allies that pre-Pearl Harbor conceptions of the Japanese as poor fliers using inferior planes were wrong.

Any American pilot will tell you that the Japanese flier knows the score and that the improved Zero plane is one of the world's finest fighters.

The fact that Allied planes have proved a match for Zeros on the 2,000-mile front north of Australia is a tribute to their pilots' flying ability.

MARTIN B-26 BEST

The American-made fighters that go against the Zeros are the Bell Airacobra and the Curtiss Kittyhawk, but it is the Martin twin-motored Marauder bomber—the B-26—that battle reports show to be the most effective.

American pilots like their own planes but they frequently express a wish that they had a little more of the Zero's all-around capabilities, especially its ability to climb fast and get on top in combat and its wide operational range.

Every pilot tried to get above his opponent in a dogfight and that's where the Japanese plane seems to have the edge. I recall an occasion in which several pilots told of surrounding a lone Zero. They figured they had it tagged. One said:

"And then what does he do? He goes straight up and leaves us there."

embodied in its construction. The engine is of the Pratt & Whitney type. German and American ideas are noted in the instrument panel arrangements.

Many structural features are those of the British Hurricane and the armament is much like that of British fighters.

It was tested for years against the Chinese, for the Japanese apparently used China as a laboratory for the machines they later used against the United Nations.

FARES BETTER

A study of Army communiques shows that the Martin bomber has fared better against the Japanese than the Airacobras and the Kittyhawks. The Zero can outrace the twin-motored heavier Martin, but it can't outgun it and it cannot take the steep dives or fly at low level with the American plane.

Once the B-26 is in the air it can take care of itself, and pilots say the Japanese have a healthy respect for it. There have been instances where a B-26's cannon literally tore Zeros to pieces, and many pilots believe that the best plane to whip the Zero will be one somewhere between the B-26 and the fighters they now are using, embodying the best of both.

smooth song of power 10 horsepower engines, ces' newest champion through its paces over the hands of Uncle MacDill field.

Martin B-26 medium g man's airplane that r the Axis and victory ations written clearly ul, from its transpar- e bombardier sits, to uling machine guns in

their valiant crews did not return to their bases, but the score was 10 men and two \$200,000 planes for two Jap carriers, each carrying over 1000 men in its crew and worth several million dollars. And adding to the score, the planes from the enemy carriers, which found no place to roost, went down in the Pacific.

The B-26's scored again in the battle of the Aleutians by sinking a cruiser and putting an aircraft carrier out of action.

They also struck hard at Cologne in Germany, in the Mediterranean, and in Coral sea, proving that whether the objective is an enemy base on land or a battleship at sea, the medium-size, medium range, but tremendously swift medium bomber, of which the 26 is today's shining example, can blast it at smaller loss than any other weapon.

Brig. Gen. Jimmy Doolittle has let the world know what he thought of the B-26 by using one on various military missions since he led the raid on Tokyo. That particular job was done in Consolidated B-25's which is just about as effective as its sister 26 but not quite as fast. It was General Doolittle who gave MacDill and Tampa their first glimpse of the 26 when he landed here about six weeks ago.

What makes the B-26 one of the most potent bomber-torpedo planes in the world today? Just a look at it will

Martin

B-26 BOMBER

Builders of Dependable



Aircraft Since 1909

Mfg. Digest

HOOSIER AIRCRAFT Co., Inc., has purchased Hoosier Aircraft, Inc., according to Samuel E. Revness, New York, one of four new board members who bought interests in the company. Engineers are being selected and new officers will be elected soon.

TYSON BEARING Corp., Massillon, O., reports dedication of the new \$1,343,000 airplane parts addition to its main plant.

WILLYS-OVERLAND MOTORS, Inc., will employ as many as 30% women in its new aircraft division in Ohio within the next few months, because of increasing manpower scarcity and satisfactory performance of women already hired.

SEALED POWER Corp. has under construction in Michigan a \$1,950,000 project, under Government contract, for production of aviation piston rings.

EMERSON ELECTRIC MANUFACTURING Co., TURRET DIVISION, St. Louis, Mo., dedicated its

airplane gun turret plant Sept. 17, to the memory of Capt. Colin P. Kelly, Jr.

LOCKHEED AIRCRAFT Corp., Burbank, Cal., in a report to stockholders, says that sales of completed airplanes, spare parts and work performed under certain cost-plus-fixed-fee contracts for the half year ended June 30, 1942 almost equalled total deliveries for the years 1940 and 1941. Deliveries for July, 1942, alone, were greater than for the entire year of 1940.

NASH-KELVINATOR, in full page advertisements during September, explained its part in aircraft and war production. "America will get its flying cargo carriers many months earlier than some of the dates you have seen discussed in newspapers," the company said.

LIBBEY-OWENS-FORD GLASS Co., Toledo, O., announces it has turned over 82,233 lbs. of aluminum to the government for use in building bombers. In present fabricated form, according to L.O.F., this aluminum is valued at \$52,451. It will receive \$19,923 from the government.

Industry's Earnings Outlook Favorable, Hare's Say

Aircraft industry earnings outlook for the duration of the war appears "to be distinctly fair and favorable," in the opinion of Hare's Ltd., New York investment firm. This outlook, the firm believes, warrants a much higher price level for representative stocks than presently prevails.

Hare's analysis further states that in post war years, in spite of considerable decrease in production of military aircraft, it is estimated there will not be less than 20% of present volume for some time.

Although production volume and amount of earnings in 1943 are of course problematical, "presumably the monthly output of aircraft will continue to increase," the analysis continues. However, it is felt the production peak has not yet been reached.

Corporation taxes will probably be higher, but there are some indications that a limit has been reached in rates on bills now being considered, and on which 1942 earnings estimates are based. Any profit limitation which Congress may set probably will not affect the aircraft industry adversely, as the proposed profit limit after taxes is 6% on sales. Estimated profit margin for 1942 on nine representative companies, after taxes, is only 2.1%.

These companies, and estimated net earnings for 1942, are: Boeing, \$5,700,000, or \$5.33 a share; Consolidated, \$6,400,000, or \$4.97; Curtiss-Wright, \$21,800,000, or \$2.60; Douglas, \$10,890,000, or \$18.15; Grumman, \$1,230,000, or \$7.77; Lockheed, \$8,450,000, or \$4.50; North American, \$6,430,000, or \$1.87; United Aircraft, \$14,500,000, or \$5.47.

Production volume in 1942, according to Hare's, will, probably, be three times that in 1941 and volume in that year was three times that in 1940, making 1942 nine times that in 1940. Post war production, it is further estimated, would represent an annual volume about 60% higher than 1940. And with discontinuance of the excess profits tax, and "fairly normal corporation tax," it should permit "the better managed and engineered companies to earn very satisfactory profits."

In addition to military planes, it is believed there will be a "substantial and growing demand" for many kinds of civil aircraft, both from domestic and foreign sources. Such types of planes as cargo transports, various sizes of passenger special purpose planes and family airliners, trans-oceanic flying boats and sports planes, are expected to be in demand.

Design Specs

(Continued from page 34)

as we can, to cut ground time, we normally would be considering servicing equipment; stands or pits on troughs first off and then portable servicing gear; engine stands, propeller dollies, etc.

The design of equipment to permit our time-to-change specifications to touch bottom is a three-way problem, in our mind. There are three "can't's" involved. You cannot design the equipment without close cooperation with the aircraft manufacturer. You cannot design the equipment without close cooperation with the operator, to fully understand his application and assure maximum utility. Finally, you cannot design or build the equipment with minimum cost and maximum applicability in either an aircraft factory or an airline hangar. Simple, sturdy equipment, designed and built with flexibility and forethought by specialists in cooperation with aircraft manufacturer and operator alike, is our idea of the proper solution.

If our suggestion were to be adopted, the primary job would be the establishment of ground-time analyses for the entire aircraft. Foundation for such a project would first assume the determination of the basic technique of maintenance to be applied to our fleet, then the

(Turn to page 44)

Contractors to the United States Army, Navy and Coast Guard, and Aircraft Engine Builders . . .

WORLD'S PREMIER AIRPLANE FABRIC

LIGHTER STRONGER SMOOTHER
FLIGHTEX

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Leading Manufacturers of Fabric and Tapes for the Aircraft Industry.

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Dine and dance in the World-Famous 'Supper Club of the Stars' . . . **The BILTMORE BOWL**.

Luncheon in **The RENDEZVOUS**, the popular Biltmore 'Night Club in the Afternoon'. Visit the beautiful **Biltmore COFFEE SHOP** . . . the world's largest, most modernly equipped.

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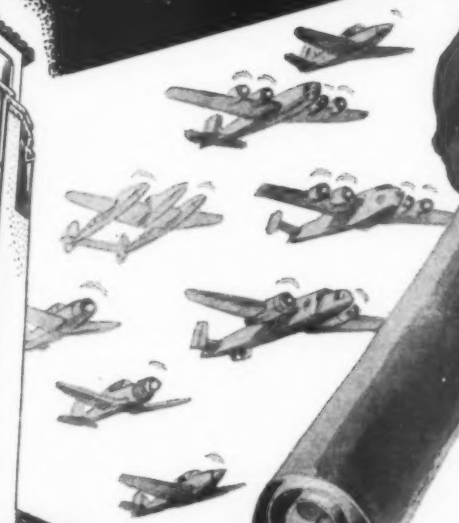
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CURTISS-WRIGHT TECHNICAL INSTITUTE

is Training the
**MOST ESSENTIAL UNIT
OF PRODUCTION**



CURTISS-WRIGHT TECHNICAL INSTITUTE

THIS TOWER OVERLOOKS AVIATION'S MOST DISTINGUISHED SCHOOL OF AERONAUTICS • FOUNDED IN 1929

7 The aviation executives face tremendous organization problems in the production of 185,000 war planes. They have been forced to accept thousands of single-phase workers from cheap "quickie" courses, but the vital supervisory positions that bridge the gap between raw material and fighting ships can only be filled by men thoroughly trained to solve any problem assigned to them. The career man with long-range training is the most ESSENTIAL unit of production. The value of such man is largely determined by two factors: his sincerity in selecting aviation as his life work, and the ability and experience of those who train him in that career. Curtiss-Wright Technical Institute, under the personal supervision of Major C. C. Mosley, President since its inception and sole owner, is America's most distinguished school specializing in the training of Aeronautical Engineers and Master Aviation Mechanics. Its standing in the industry is attested by its selection by Donald Douglas, President of the Douglas Aircraft Company, as the school for his own son's training. Its ac-



cumulated experience of many years in technical aeronautical instruction supplies the aviation industry with personnel thoroughly trained as supervisory personnel and is now being utilized in the National Defense Program by the U. S. Army Air Corps in the training of hundreds of selected men in the Army Air Corps and its associated organizations. California Flight Academy, Mira Loma Flight Academy and United States Army Air Corps, are extending primary and secondary training to Aviation Cadets of the U. S. Army Air Corps and the Royal Air Force. With a curriculum covering general curriculum and unexcelled facilities, Curtiss-Wright Technical Institute, under the supervision of Major C. C. Mosley, is the industry's call for men who will be the backbone of the career men in the aviation industry. Curtiss-Wright Technical Institute has the most passed facilities are available to the aviation industry. If necessary to meet the industry's demand, "QUALITY" graduates the "QUALITY" graduates of the thousands of long-range workers in the pursuit ships that will bring the aviation industry to the forefront of the world.

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Financial Briefs

LOCKHEED AIRCRAFT Corp., Burbank, Cal., in an interim letter to stockholders, states that cash at June 30, 1942 was about \$14,000,000, compared with \$9,000,000 at the end of 1941. At June 30, 1942, bank borrowings were \$38,600,000, against \$30,600,000 at the end of 1941. After providing reserves for taxes and contingencies, net profits for the six months ended June 30, 1942 were about 2.5% of sales, compared with 6.5% in the same period of 1941.

MOTOR PRODUCTS Corp., Detroit, Mich., reports for the fiscal year ended June 30, 1942 net profit of \$757,908, or \$1.94 a share, common, against \$405,034, or \$1.04, for the year ending June 30, 1941. A total of \$200,000 was allowed for depreciation and inventory losses, and \$510,000 provided for estimated U. S. and Canadian income and excess profits taxes, according to independent audit of the firm's accounts.

Classified Ads

EXCELLENT OPPORTUNITY Offered for **CHIEF INSPECTOR** with Aircraft Company Holding AA-1 Rating Operating Under Government Prime Contract. Wood—Steel—Fabric Construction. Kindly Apply in Writing to Box 350, AMERICAN AVIATION, American Building, Washington, D. C.

Established eastern aircraft concern has vacancies for experienced layout men and stress analysts. Three and four years aircraft experience essential.

G & A AIRCRAFT, INC.
Pitcairn Field, Willow Grove, Pa.

MINIMUM RATE

Stabilized



Voluntarily, The Lexington stabilized its minimum rate—in 1939! It's still \$4.00—and more than one-half the total number of rooms in "New York's Friendly Hotel" are now, as before, available at that price...all outside with combination tub and shower, circulating ice-water, full-length mirror, four-station radio. Home of the famous Hawaiian Room.

Hotel Lexington

Charles E. Rochester, V. P. & Mgr. Bk.
LEXINGTON AVE., AT 48TH ST., N. Y. C.

On the Labor Front

ALUMINUM COMPANY OF AMERICA, INC.

A three-day strike of workers in the smelter division which threatened to curtail production in other ALCOA plants was ended by a vote to await settlement mediation after conference with AAF investigators. An agreement granting workers in several plants a five-cents-an-hour wage increase has been sent to NWLB for approval. Agreement was reached by company officials and leaders of United Mine, Mill & Smelter Workers-CIO during a four-day conference.

BOEING AIRCRAFT CO., Seattle, Wash.

Dispute over wages and hours with IAM-AFL employees is certified to NWLB.

BROWN & SHARPE MFG. CO., Providence, R. I.

Company is ordered by NWLB to sign a contract with IAM-AFL providing for "equal pay for equal work" for female employees.

BUICK MOTOR CAR CO.

Lt. Col. G. E. Strong, air plant protection officer for AAF Central Procurement District, suspended permanently two CIO shop committeemen accused of encouraging the recent strike.

CESSNA AIRCRAFT CO., Wichita, Kans.

Dispute with IAM-AFL workers over wages and closed shop is certified to NWLB.

CHRYSLER MOTOR CO., Detroit, Mich.

NWLB granted an increase of four cents an hour to employees on "Little Blue" cost-of-living formula. UAW-CIO leaders protested the decision.

CRITTALL-FEDERAL SASH CO., Waukesha, Wis.

Company is ordered by NWLB to make retroactive to Jan. 1, a general wage increase of two to five cents granted voluntarily by the company in May.

GENERAL MOTORS CO.

Three of NWLB employer members, in a dissenting opinion, described Board's recent order granting maintenance of membership to unions at GM plants as "unsound" and conducive to future labor troubles.

IRVING AIR CHUTE CO., Buffalo, N. Y.

A controversy over wages and union shop has been certified to NWLB.

LOCKHEED AIRCRAFT CORP., Burbank, Cal.

Dispute with IAM-AFL employees over wages has been certified to NWLB.

MARVEL SCHEBLER CARBURETOR CO., division of Borg-Warner Co., Flint, Mich.

Case involving UAW-AFL workers and the reinstatement of a discharged woman employee affiliated with CIO, has been certified to NWLB.

PINE INDUSTRIAL RELATIONS COMMITTEE, Klamath Falls, Ore.

Agreement with California Provisional Council, International Woodworkers of America-CIO concerning uniform wage increases, vacation provisions, union shop and wage increase retroactive to Sept. 1, has been certified to NWLB.

SHELL OIL CO.

Deer Park Refinery is directed by NWLB to grant Oil Workers Union-CIO maintenance of membership and recognition of union.

SPICER MANUFACTURING CO., Toledo, O.

Dispute over wages is certified to NWLB.

STANDARD TOOL CO., Cleveland, O.

Employees have been granted a voluntary maintenance of membership clause in new contract. NWLB held in abeyance a panel recommendation for a 6½% wage increase to reduce claimed differential between company pay and that of other firms in the area.

J. H. WILLIAMS CO., Buffalo, N. Y.

Company announced a five cent-an-hour general raise after NWLB rejected mediator's recommendation for an increase of six cents. Raise is retroactive to May 1. Agreement also included maintenance of membership clause and dues check-off ordered previously by NWLB.

WRIGHT AERONAUTICAL CORP., Paterson, N. J.

Stipulated facts in the charges that the company dominated the Wright Aeronautical Employees Association were forwarded to NLRB in Washington for final ruling.

WRIGHT AUTOMATIC MACHINE CO., Durham, N. C.

I. I. McClintock, general manager, asked NWLB to curb labor piracy. Claimed that representatives of an "Akron aircraft concern" lured workers away with higher wages than local firms could pay. As result local IAM-AFL demanded blanket increases of fifteen cents an hour for day employees and twenty-five cents an hour for night workers.

Design Specs

(Continued from page 42)

matter of equipment to be employed. Of course, only general decisions could be made at this stage. Mutually satisfactory times might then be achieved on a closely cooperative basis between manufacturer and operator. Pooled experience, a utilization plan for aircraft, a detailed analysis of specialist shop capacities, etc., would all contribute to the ultimate achievement of literal "ground speed."

The study and subsequent specification of the factors of serviceability and safety through complete information would have to be simultaneously acted upon. However, space considerations preclude the possibility of our treating these points in detail at this time.

Possibly, the extension of on-ground-time specifications to cover even those "accessory" manufacturers who supply some one-half of the aircraft weight empty, is the next move toward mass air transportation marked by high efficiency.

How such a program should be administered poses a problem. Basic solution from the standpoint of expediency may be to have each individual airline make analysis of the factors involved in its own specific operation; crystallize this data into a detailed spec form and finally work directly with the aircraft manufacturer.

A broader, general solution might be offered in the form of close cooperative activity between ATA and the Aeronautical Chamber of Commerce. With these two agencies clearing houses, the consolidation of data-exchange might offer the advantages of large-scale standardization of both problems and answers.

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FITTINGS FOR BETTER
PERFORMANCE, SERVICE
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AEROQUIP SELF-SEALING COUPLINGS

RACKS EMPTY



...mission completed with safe return of ship and crew despite enemy flak, thru assistance of ADEL Hydraulic, Anti-Icing and Line Support Equipment. Hundreds of thousands of units are winning the confidence of United Nations Air Forces in combat service thruout the globe.

Illustrated - ADEL AN Aeromautical Standard Hand Pump. Laboratory-tested and Time-tested. Over 200,000 cycles @ 1500 psi. -double the AN Specifications with no change of seals, no sign of wear, 26% less weight, 7 fewer machined parts. Restrictions permit complete information only to recognized Aviament Engineers.

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